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* *Leading Articles* *

Obesity

By James H. Hutton, M.D., Chicago

Cardiovascular Syphilis in the Negro

By Jack C. Norris, M.D., Atlanta, Ga.

The Gastroduodenal Catheter

By F. D. La Rochelle, M.D., Springfield, Mass.

Coronary Thrombosis

By Dietrich Klemptner, M.D., Chicago

Orienting the Psychic Patient

By Gregory Stragnell, M.D., New York, N. Y.

The General Practitioner as a Research Worker

By F. B. Young, M.D., Long Beach, Calif.

Early Vaginal Contraceptives

By Marie Stopes, D.Sc. (Lond.), Ph.D. (München), F.L.S., etc., London, Eng.

Medical Electrolysis in Office Practice

By L. E. Barnes, M.D., Chicago

Bell's Palsy

By William Martin, M.D., Atlantic City, N. J.

A Radiologic Diagnostic Clinic

By I. S. Trostler, M.D., F.A.C.R., F.A.C.P., Chicago

Editorials

John Osborn Polak
The Research Clinician
Throwing Out the Baby
Jacking Up the Ego

Personal Observation
Good Will
How Do You Fight a Giant?
Questions and Answers

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CLINICAL · MEDICINE AND · SURGERY

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John Osborn Polak, M.D., M.Sc., F.A.C.S.

FOUR generations of Polaks had lived in Brooklyn, New York, when, on March 12, 1870, Mary E. (Osborn) Polak presented her husband, Karl T., with a son, and they called him John Osborn.

When the proper time arrived, young John went to the public schools in New Brunswick, New Jersey, and later to Rutgers College, in the same city, which gave him his B.Sc. degree in 1889 and later (in 1901) his Master's degree in Science. Meantime, he had received his Doctor's degree in Medicine (1891) from Long Island College Hospital and the University of Vermont, at which time he was given the Dudley Medal for Surgery.

Immediately after finishing his internship (or, in fact, coincidental with it), he was made instructor in histology and obstetrics in Long Island College, at the early age of twenty-two years. Three years later he took the position of instructor in obstetrics at the New York Postgraduate; became adjunct professor in 1898; and professor in 1901, which position he held for six years. From 1900 to 1910 he was assistant professor of obstetrics and gynecology in Long Island College.

In addition to these teaching positions,

he was professor of obstetrics and clinical professor of gynecology in Dartmouth Medical School, from 1902 to 1912, and in the latter year assumed the chair of obstetrics and gynecology in the Medical School of Long Island College Hospital, which he held to the end of his life.

But the didactic side of his profession by no means filled his time. He was, for years, chief obstetrician and gynecologist to the Long Island College Hospital and served in similar capacities on the staffs of a dozen or more other hospitals, in and around New York City.

Dr. Polak was one of the founders and a life member of the American College of Surgeons, serving as one of its governors for two terms and as a regent from 1927 until his death. He was also a fellow of the Royal Academy of Medicine (Ireland) and of the American Medical Association (chairman of the section on obstetrics in 1921), and a member of the American Gynecological Society (vice-president in 1924); the American Association of Obstetricians, Gynecologists and Abdominal Surgeons (president in 1927); the New York Obstetrical Society (president in 1916); the Brooklyn Gynecological Society (president in 1910); and of ten or a dozen other professional societies.

He was, moreover, a considerable contributor to the literature of his specialty, having to his credit (besides volumes in which he collaborated with others) three books of his own—"Manual of Obstetrics" (1913); "Students' Manual of Gynecology" (1915); and "Pelvic Inflammation in Women" (1921); besides many articles in the current periodicals. In addition to these achievements, he was on the editorial boards of the *International Abstract of Surgery*, the *American Journal of Surgery* and the *American Journal of Obstetrics and Gynecology*.

Dr. Polak was a wise and popular teacher and one of the most insistent advocates of more adequate instruction in obstetrics in our medical schools.

As will be seen from his many positions of executive responsibility, he was widely and actively interested in Organized Medicine, where his dynamic activity and constructive counsels will be sorely missed.

He passed to his rest on June 29, 1931, depriving this country of one of the great gynecologists and obstetricians of our day.

THE RESEARCH CLINICIAN

IN THIS issue we are publishing an article by a man who has done a great deal of clear, straight thinking and enough writing so that he is able, in a few words, to give one food for thought for several weeks or months. This time he has turned his attention to the matter of clinical research, and we commend his suggestions to the attention of every reader.

We are still in the midst of the era of the apotheosis of the laboratory and laboratory workers. The value of this work, which has, to a large extent, lifted medical practice out of the realm of empiricism, is beyond estimating and must continue; but an increasing number of physicians and other scientists is coming to realize that some of our most pressing problems in the business of relieving human beings who are ill, or of preventing their illnesses, cannot

be solved by the laboratory alone, but require the assistance of able clinicians, with trained powers of observation, *watching* their patients, at the bedside and in the consulting room, and *faithfully recording and reporting* what they observe with their five senses and elicit by means of intelligently-taken histories, as did Hippocrates and Sydenham.

Dr. Young says a true word when he remarks that, in times past—and, to a less extent, even now—the men who could and did do such work had and have difficulty in bringing their findings to the attention of the profession, where they can be tested in the crucible of daily practice.

That is one of the functions which CLINICAL MEDICINE AND SURGERY aspires to perform—to offer to the clinical research worker a high-class medium for bringing the results of his labors before a large group of men whose chief interest is directed toward ameliorating the condition of persons who are actually ill, and who, therefore, will be especially interested in clinical suggestions and peculiarly qualified to test them and aid in establishing or disproving their general validity.

This, then, is a direct and personal invitation to any who are engaged in clinical research to submit for our consideration their papers which have been prepared in the same scientific spirit and method as animates the laboratory researchers, with the assurance that they will be judged on their own merits, rather than upon the university and hospital connections of their authors.

Moreover, if a paper is submitted which, for one reason or another, is not quite up to standard, its author will receive direct and constructive suggestions as to why it falls short, so that he may have an opportunity to strengthen its weak points, with such help as we are eager to give him, and resubmit it at a later time, when it has been put in more satisfactory form, as to matter or manner or both.

We shall hope to see many papers of

this sort during the present and succeeding years.

Facts are less stubborn than are the individuals who claim to be in possession of them.—Dr. C. B. Burr.

THROWING OUT THE BABY

SCIENTIFIC research and discovery are rushing forward at such a pace that one can scarcely pick up a newspaper or a magazine of any kind without reading about some new advance in human knowledge. In fact, if all that we now know, in the fields of economics, sociology, hygiene and therapeutics, were being effectively applied to ameliorating the condition of mankind, the millenium would be here at this moment. There are even those who suggest that we would do well to declare a moratorium on discovery until practice has come reasonably near to catching up with it.

The contention of those who would apply the brakes to research for a while are not without merit. There is a very real danger in the possession of great masses of advanced knowledge, of which we are not sufficiently developed, spiritually, to make intelligent use without jeopardizing the safety and welfare of ourselves and others.

There is, too, another danger, which seems to apply with especial force to physicians; and that is that, in the rush and drive of keeping up with the most recent announcements in the medical field, the baby may be thrown out with the bath water.

The pronouncements of Hippocrates, Galen, Sydenham and other great clinical observers are, no doubt, old, but many of them are by no means old-fashioned (except in point of time) nor out-of-date, even now. If a certain line of clinical procedure produced prompt and satisfactory results 2,000 years ago, and has continued to do so down the centuries, it would be decidedly foolish to abandon it for something newer, until that something

has demonstrated, beyond peradventure, its therapeutic superiority over the method which it purposes to displace. There are, so far, no thoroughly reliable substitutes for calomel, quinine, digitalis and applications of heat and cold, to name but a few of the time-tried remedies.

One great trouble seems to be that new things are coming so fast that a man scarcely has time to familiarize himself with the powers and limitations of one new drug or other agency, before he feels that he must begin experimenting with another, lest he be accused of being behind the times.

This is not a suggestion that all or any physicians should neglect to become acquainted with the merits of the new remedies which are constantly being offered. It is the duty of every member of the medical profession to give his patients the benefit of any and every method which bids fair to ameliorate the abnormal conditions from which they suffer; but it is a plea that, before rushing off in pursuit of a new idea, simply because it is new, the would be rusher stop a moment and consider carefully whether or not he fully understands the methods he is now using and is getting out of them everything they offer, to the satisfaction of his patients and himself. If the work expected is being accomplished, why change?

Of course, research is giving us preparations which cover a virgin field and do things which the older drugs would not do. The glandular extracts are examples of this, and so are the newer barbituric acid compounds, some of the more recent local anesthetics, the copper containing hematinics, the vitamin preparations, such as viosterol, and scores of others. We must find out about these, and use them when and where they are indicated. This means study and clinical experimentation.

It seems timely, however, to suggest that it would be a valuable practice for every physician to post himself as to every

detail of the possibilities and limitations of ten or a dozen of the older therapeutic methods, and apply them, strictly according to the accepted indications, in a number of cases, keeping records which will assure him of their exact value—or their lack of value.

Blessings and honors to the researchers who are giving us keener and more accurate weapons for our warfare against disease and suffering! We should be making as full use as possible of the new things they bring to us. But we should also use *discrimination*, to the end that, while we are installing the most modern plumbing in our professional houses, we do not throw out the baby.

JACKING UP THE EGO

ADDICTION to the use of narcotic drugs or alcohol is a bad habit, certainly, even though we recognize that such addictions are escape reactions, into which only those persons fall, whose psychic equipment is inadequate to face the vicissitudes of life and cope with them.

If people are to be cured of addictions like this, the first essential is that they shall sincerely *desire* to be cured; and, if they are to *stay cured*, their morale and power of psychic resistance must be raised in some way. That is why such patients can rarely be treated successfully in their homes, but require institutional care—they need intelligent and well-directed *help* in finding themselves and developing an appreciation of their own capacities, as well as strict and unwavering regulation of the drug to which they are addicted. That is also why a good many people who go to such places as the Keeley Institute are better men, in all ways, afterward; and the lack of such psychic help, or their inability to profit by it, is the reason why a good many slip back into their old habits, after a time—they again find their environment too much for them, and again seek an escape in drugs or alcohol.

There are thousands—perhaps millions

—of people in this country today who are psychically inferior, from one cause or another, who have *not* become drug addicts, but who escape by the route of more or less pronounced schizophrenia or hysteria or are just plain failures.

If it is possible, in properly-conducted institutions, to so jack up the morale of one who escapes from life through a drug addiction, that he becomes a useful and productive member of society, why would it not be practicable to perform the same service for the non-addicted escapers, in an institution planned on somewhat similar lines?

It may be argued that we already have public and private institutions for the care of the mentally diseased; but that does not answer the question. Most of these places are so preoccupied with the custodial care of deteriorated dementals that they give too little attention to the curative treatment of the milder cases; and only a very few of them have the time, the trained personnel and the inclination to render any real service to the "borderline cases"—the psychoneurotic, hysteric and psychasthenic patients, the mild schizophrenics and other chasers of rainbows.

If there are enough men in the country who have sufficient genuine human sympathy and understanding and adequate training for such work (which seems open to doubt), it would appear that *morale-building* institutions, in various parts of the country, would serve a very pressing personal and national need. And if such men are not now available, we feel that the process of developing them should begin at once.

We must remember that, just as a man cannot lift himself over a fence by his shoestrings, so these psychically handicapped unfortunates are not self-starting and need expert and sympathetic assistance in getting themselves under way, and guidance until they are running reasonably smoothly. Why should all of this help be reserved for the drunkard or the "hop-head" or "snowbird"?

PERSONAL OBSERVATION

IT IS related that, on a certain occasion, Socrates was receiving a report from his pupil Glaucon, in the course of which the ancient Greek philosopher was led to inquire, "Did you go, yourself, and examine this, or how do you know?"

At best, an overwhelming percentage of our so-called knowledge is assumed knowledge. Few of us *know*, by our own personal observation (and that is the only kind of thing that can properly be called knowledge), that the sun is 93,000,000 miles from the earth; that light travels 186,000 miles a second; that the boiling point of water, at sea level, is 100° Centigrade; that a camel can go ten days without a drink; or that there actually *are* such places as Azerbaijan and Patagonia, and yet we constantly (and quite reasonably) *assume* that all these things are true, on the testimony of reliable witnesses who have personally demonstrated their reality or validity.

Since the principal reason for human incarnate existence seems to be the acquirement and multiplication of individual experiences, it seems rather sad to see so many people accepting the word of others for things which they might easily observe and experience in their own persons.

Physicians frequently (and justly) complain that it is useless to buy most of the new medical textbooks, because too many of them merely repeat what has been said in those which preceded them and represent only a minimal amount of personal research and verification by their authors.

But some of those who inveigh most loudly against such practices are guilty of worse every day of their lives.

A patient comes into the office and says, "Doctor, I have been troubled for several months with muscular rheumatism in my shoulders"—or indigestion or nervousness or whatever; or remarks, "Doctor Blank told me last year that this eruption on my arms and legs was eczema." And upon hearing these ridiculously unintelligent,

ready-made diagnoses, too many physicians will proceed, after a wholly inadequate study and examination of the patient, to prescribe for what the patient *thinks* is wrong with him. There is entirely too much reality behind the story of the sick negro who insisted that a veterinarian be called to treat him, "Cause his patients can't talk and he jest na'chly has to find out what ails 'em."

An *intelligently taken* history of the case should be the first step in every professional consultation and if this, by itself, does not establish the diagnosis (as it often does), it should be followed by such clinical and laboratory examinations, performed as far as is practicable, by the *physician himself*, as are indicated. Only when these things have been done has the medical man earned his fee, no matter how small it may be.

Today, many of us are too ready to let the laboratories make our diagnoses for us, without questioning or verifying their findings or attempting to correlate them with the history or with clinical observations. A positive Wassermann test, by itself, is not an incontrovertible evidence of syphilis; nor does the presence of albumin in a certain specimen of urine always mean that the patient suffers from nephritis. Even roentgenographic observations are subject to human errors on the part of the man who studies the films.

Few people have such wonderful opportunities to make direct, personal observations as those which are accorded to physicians, and the man who fails to make rational and sincere use of those opportunities, *every day*, is neglecting the surest means for his own advancement and progress. Moreover, until he can answer the first part of Socrates' question in the affirmative, he has not performed his duty to his patient and has no right to consider himself a true physician, even though the walls of his office may be covered with diplomas and certificates of proficiency.

GOOD WILL

THE winter solstice, celebrated by the nations who own allegiance to the godlike Son of the carpenter of Nazareth as Christmas, is upon us, but the prospect of fulfillment of the first part of the message proclaimed by the angels at His advent, commonly translated, "Peace on earth; good will to men," seems decidedly remote and of the second part somewhat dubious. The consensus seems to be that we are in for a tough winter.

Most of us feel that there is little which we, as individuals, can do toward the establishment of "Peace on Earth"; but that highly desirable condition will come when every individual sincerely does all he can in that direction, for the coordinated thought of men and women who make up what we call "The Nations" can remold the world nearer to our hearts' desire.

As a matter of fact, the realization of the first part of this stupendous program depends upon the part by everyone of us. world could wake up ing with nothing in will to men," all of struggles and heart-mankind today would the midsummer sun. be such a heavy job. hate or jealousy or cor or any other de-



ifestation of its second If every citizen of the on Christmas morn- his heart but "Good the problems a n d burnings which vex vanish like dew before That ought not to No one of us cherishes covetousness or ran- structive feeling

against any large number of people. If each one would set his heart right toward his own personal "enemies," what a load of gloom would be lifted and what a rush of constructive power would be released!

The essence of the life and teaching of Him whose symbolic birthday we celebrate when the sun turns northward was the beauty and joy and general profitableness of *selfless service to others*—"Love thy neighbor as thyself"; "Do unto others as ye would that they should do unto you." Utopian? Not a bit of it! If every one of us would concentrate upon the actual performance of those gentle commands for one year, the trick would be turned. And if we could *actually realize* that the law of cause and effect *work always*—that we will be loved exactly in proportion as we love, and done by exactly as we do—there would be a grand rush to get on the bandwagon.

This winter is going to be a good time to practice the unselfish virtues. Millions of people are going to be in dire need of what we can give them, in the way of material substance, intelligent assistance and spiritual encouragement, so none of us will have to look far for someone to practice upon. The *will to service*—"good will"—is all that will be needed. If we work at this consistently for the next few months, perhaps we can acquire the lovely habit.

It has been wisely said that no one can hate a man whom he understands. Let us take some vigorous exercises in understanding at this good season, to warm up the stagnant blood of our souls and fill our eyes with the shine and our hearts with the cheer of "Good will to men."



LEADING · ARTICLES

Obesity*

By James H. Hutton, M.D., Chicago

STYLES change in medicine as well as in other fields of human endeavor. Some years ago the question of obesity was discussed only by our wives and daughters. Its serious consideration was quite beneath our dignity. Its treatment by a doctor was something that he needed to defend. That all this is changing is indicated by the growing literature on this subject. The March issue of the *American Journal of the Medical Sciences* contained two^{1,2} interesting articles on this subject. The February issue of *Annals of Internal Medicine* contains a very interesting article by Kremer³. The *Illinois Medical Journal*,⁴ for April, 1931, contains a valuable article by Dr. Hugo R. Rony, who is doing some good work at Northwestern University Medical School in the investigation of obesity.

Preventive medicine is the medicine of the immediate future, if not of the present. Treatment of obesity is in line with this tendency. By correcting obesity we can many times prevent some of the ills that come in its wake.

DANGERS OF OBESITY

The dangers of superfluous flesh have been enumerated so many times that it is almost superfluous to mention them again. Obesity usually precedes the development of diabetes. Arteriosclerosis and hypertension are more frequent among the obese. It has been estimated that each pound of fat adds 4,500 linear feet of blood vessels to the body's supply. From this it is readily seen what a great burden is put on the heart by the addition of 30 or 50 pounds to the body weight. Fat adds to the danger of an anesthetic and to the danger of postoperative infection, as well as to the

mechanical difficulty of the operation. Besides that, the obese individual fights infection less efficiently than the person of normal weight. It adds to the premium of the fat-man's life insurance, provided the insurance company accepts him at all. His clothes cost more, not only as to original cost, but also in the upkeep. Nobody loves a fat man—he is a poor bed-fellow. His mental processes are less keen than those of his thin friend. Remember, Mark Anthony wanted sleek, well-fed men about him, alleging that they were less dangerous than the thin ones, who "thought too much." Industry discriminates against the fat man; many positions are closed to him.

ETIOLOGY

A few years ago some of our scientists, particularly the younger ones, announced, *ex cathedra*, that fat was solely a matter of diet. If a man ate too much he got fat; if he ate less than his caloric requirements he got thin, and that was all there was to that. Like most other theories that do not square with common sense, that one is being discarded. It is a matter of common observation that some very fat persons are very light eaters and that many others eat no more than their thin friends. Furthermore, there is one type of fat persons which craves sweets and eats considerable amounts of them. Another type craves fats and cares little for sweets. There is the thin person who eats very large amounts of food, but does not gain weight.

That diet is important goes without saying. The obese person who wishes to become thin will have to eat less than his caloric requirements. But he will lose weight much faster and with less inconvenience, if he considers other factors, as well as diet.

*Read before Will-Grundy (Ill.) Medical Society, March 11, 1931.

CLASSIFICATION

Many classifications have been suggested: Exogenous, meaning that variety plainly due to overeating; endogenous, meaning that variety produced by the ingestion of normal amounts of food. Exogenous and endogenous are, of course, a poor classification, because the defect is probably the same in both, differing only in degree.

The anemic type and the plethoric type are also noted. These terms are self-explanatory, but mean nothing beyond indicating the appearance of the victim. The plethoric type of obese individuals is active, both mentally and physically. They are strong-willed, make decisions quickly and have the mental and physical ability to carry them out. They excrete rather more than the average amount of perspiration and have plenty of strength and endurance. They differ in almost all of these particulars from the anemic type.

Strouse⁶ and his co-workers suggested the following classifications:

- 1.—*Mast-fettsuch*; due to overeating, under-work or both.
- 2.—Thyrogenous; due to deficient thyroid secretion.
- 3.—Constitutional; due to neither of the above causes.

Strouse⁷ seemed to demonstrate that obese persons derive less energy from fat than do persons either of normal or under-weight. The obese derive more of their energy from the carbohydrates. Lately much doubt has been cast on these conclusions. Nervous influences sometimes play a part; injuries to the mid-brain sometimes lead to obesity. Rony⁴ visualizes a fat-regulating mechanism that determines the upper limit of an individual's weight.

THE GLANDS INVOLVED

Three glands have been variously charged with responsibility for obesity: the thyroid, the pituitary and the gonads. Each of them is undoubtedly at fault in various cases. The thyroid was the first one recognized as having some influence in the accumulation of fat. Obesity of thyroid origin is recognized by the usual signs of and by the usual laboratory findings in hypothyroidism.

HYPOTHYROIDISM

Subjective complaints: Loss of strength and endurance; loss of "pep"; neuritis-like pains, sometimes resembling those of tabes; retarded mental processes; cold extremities

and sensitiveness to cold; stiffness of muscles and joints, worse in the morning; tinnitus, catarrhal deafness, vertigo.

Physical findings: The skin is dry. In color it is pale, like alabaster, or yellowish, like parchment, with a flush over the malar prominences. The hair is dry and brittle on the head, scant in the axillary and pubic regions and frequently missing on the extremities. The outer thirds of the eyebrows are thin. The nails are brittle, ridged and contain white spots. The teeth are of poor quality; if the condition began in infancy, they are irregularly placed. The bones are slow in developing and the epiphyseal lines are slow in closing; this condition sometimes causing the slow healing of fractures.

Distribution of fat: Padding on the dorsum of the hands and feet, fingers and toes, in the supra-clavicular spaces and dorsal cervical area; edema of the upper eyelids, with narrowing of the palpebral fissures; thickening of the lips; slow pulse, slow respiratory rate and lowered basal metabolic rate.

The Boston⁸ workers list the following as frequent complaints of individuals afflicted with hypothyroidism:

- Exhaustion
- Irritability
- Personality changes
- Marked change in weight
- Hypothermia
- Diminished perspiration
- Menstrual disturbances
- Headache
- Paresthesias
- Constipation
- Loss of hair
- Diminished libido

*Summary of physical findings:**Physical examination:*

Skin: Dry and cold; myxedematous.

Hair: Dry, brittle, scant on body, extremities and outer third of eyebrows.

Nails: Dry, brittle, ridged and showing white spots.

Teeth: Soft, of poor quality and irregularly placed; gums inflamed.

Padding: Supraclavicular; dorsal cervical; dorsum of hands and feet.

General: Obesity of general distribution; bradycardia; respiratory rate slow; blood pressure most often low. Some cases resemble nephritis, as to complaints and urinary and physical findings.

Laboratory findings:

Low basal metabolic rate; lymphocytosis; low blood-sugar; lung volume reduced; total N in urine low.

The exceptions to these findings occur in cases where both the thyroid and pituitary are involved. In such cases the basal metabolic rate is apt to be normal or a little above, and the signs of hypothyroidism are masked by the presence of signs of hypopituitarism of the posterior lobe. The only way to determine accurately how much thyroid deficiency exists in such cases is by trial, giving thyroid to the point of tolerance, as manifested by tachycardia, nervousness, restlessness, precordial pain, palpitation, or occasionally by paroxysmal tachycardia.

I recently saw a case of the bilobar hypopituitary type in a woman who took thyroid on her own responsibility. She developed several attacks of paroxysmal tachycardia and, later, attacks of severe precordial pain. There was absolutely nothing in the physical or laboratory findings on which to base a diagnosis. Later we were able to unravel the mystery by getting the history of recurring attacks whenever thyroid was taken. She had taken very small doses for the purpose of reducing. She lost weight rapidly and felt better when taking pituitary preparations.

Some years ago Engelbach⁹ told me of a fat woman who had a basal metabolic rate of plus 40 percent, to whom he was afraid to give thyroid, but who lost only a small amount of weight on pituitary medication and diet. When he finally gave her thyroid, she lost much more rapidly and showed no signs of thyroid intoxication.

The basal metabolism has undoubtedly been taken too seriously in this connection. It measures the gaseous metabolism of the body, but not the entire metabolism. Recently Morris¹⁰ has reported cases that were greatly improved by thyroidectomy, and yet their metabolic rate before operation was considerably below normal. There are many cases of minus readings which cannot be brought up to normal by thyroid. They develop signs of thyroid intoxication before the metabolism approaches normal.

Persons of the pituitary type frequently develop a craving for sweets, much resembling that due to hypoglycemia. They also have a low blood-sugar. For many years it has been known that hypopituitarism has been accompanied by an increased toler-

ance for carbohydrates. This is particularly true of those we think of as of the posterior lobe type. It seems likely that, in such cases, the carbohydrates and fats are so quickly transported to, and stored in, the muscles, liver and other tissues, that the oxidative processes of the body do not have a sufficient opportunity to burn them up.

Pituitrin has an antagonistic action to insulin, if the two are given at the same time. But, if the insulin is given first, the action of the pituitrin is inconstant and uncertain. It seems that pituitrin has an antagonistic effect on the storage action of insulin, but has no power to unlock the warehouses of the body once the food stuffs have reached them. This, of course, is not true of adrenalin, which will combat the action of insulin, whether they are given at the same time or otherwise.

HYPOPITUITARISM

Symptoms:

- 1.—Disturbances of menstruation: The flow is most often less profuse than normal and there is some increase in the intervals between periods.
- 2.—Asthénia.
- 3.—Headache, usually described as beginning in the frontal region and radiating along the hair line to the occiput.
- 4.—Increase in weight, most prominent about the shoulder and pelvic girdles.
- 5.—Paresthesias.
- 6.—Constipation.
- 7.—Lethargy, diurnal drowsiness, somnolence. This usually indicates a coincident thyroid deficiency.

Physical findings:

Skin: Soft and delicate; rough on posterior aspect of upper arms.

Hair: Fine, heavy, oily. Hypertrichosis is frequently seen where hyperpituitarism of the anterior lobe has preceded the pituitary deficiency. In some cases the area over the sacrum is covered with hair. This occurs in cases having a rough skin and considerable perspiration, resembling the plethoric type of obesity.

Nails: Small, in cases of early onset.

Teeth: Even, regular, small; decalcification early and rapid decay.

Weight: Increased; obesity of girdle type.

Abdomen: Folds of fat, instead of being smooth and round like a balloon, as in the thyroid type; pads on sides of thorax. The

pituitary type of obesity is characteristically distributed about the pelvic and shoulder girdles, with little fat below the elbows or knees or above the clavicles.

In the diabetic patient, the fat metabolism is almost as seriously disturbed as is the carbohydrate metabolism. After meals, lecithin should increase in the blood stream, but it does not; while cholesterol should not increase, but it does. The fat appearing in the blood stream after a meal should be absorbed by the red blood cells, but it isn't. It is possible that the metabolism of cholesterol is intimately related to arteriosclerosis and that diabetics develop arteriosclerosis more frequently than the average person, because of the defect in their fat metabolism and also because more of their diet has to be made up of fat.

THE GONADS

The gonads, particularly the ovaries, are also charged with contributing to obesity. That they intimately influence the body in gaining weight at certain periods is well known. For example, the marked gain in weight and change in contour that occurs in girls at puberty is undoubtedly due, in part at least, to some change in the activity of the ovaries. Probably they take on added activity at that time. At the other extreme of the sexual history we frequently see a marked and rather rapid gain in weight at the menopause. The woman who has been slight, or at least of rather shapely proportions, suddenly takes on considerable weight. This is probably due to some change in the activities of the ovaries. That it is *not* due to some sudden cessation in bodily activity seems rather well proven, by clinical observation at least.

Workers at the Evans Memorial Hospital¹¹ have shown that the ability of the female body to tolerate galactose, without allowing any to escape in the urine, is parallel to, if not dependent on, ovarian activity. The tolerance increases, from prepubertal levels of about 20 grams, to double that amount in full adult sex life, and then descends to a level of about 30 grams after the menopause. However, gonadal obesity is much more difficult to recognize than the other types.

The pituitary type of obesity is frequently accompanied by a secondary hypogonadism, as shown by a decrease or cessation of the menstrual periods. And yet there seems little doubt, in such cases, that the pituitary is the primary offender and treatment di-

rected at the pituitary deficiency is much more effective than treatment directed primarily or principally at the gonadal deficiency.

The thyroid is frequently involved at the menopause, so that we are much less apt to have a pure gonadal obesity than we are to have a pure thyroid or pituitary type.

TREATMENT

Obesity, like diabetes, is not due entirely to dietary indiscretions; at the same time, dietary restrictions cannot be overlooked in its treatment. The total calories should be reduced to the requirements for the patient's ideal weight, the greatest reduction being first in the fats and second in the carbohydrates.

The patient should be allowed a full ration of proteid or even more than the usual amount given to persons of his weight. This latter procedure is for the reason that proteid has a stimulating effect on metabolism—the so-called "specific dynamic effect." Proteid is usually allowed in the amount of one to one and a half grams per kilogram of body weight. Small amounts of free fat are allowed, to avoid vitamin deficiency; frequently cod-liver oil or viosterol is given for the same purpose. The balance of the diet is made up by 5- and 10-percent vegetables and fruits. Water is not restricted.

Patients are frequently asked to indulge in sweat baths, either in the electric cabinet or in their own tub. Occasionally Salyrgan is given, to be sure that water is not being retained. Salt is reduced to a very moderate intake. I usually instruct patients not to add any salt after food comes on the table.

Water is frequently retained, particularly just before the menstrual periods. It is not at all uncommon to have patients gain two or three pounds just before a period, only to lose it in the following week. This premenstrual gain in weight is a rather common phenomenon. By inquiring of other patients than the obese ones, it develops that many women regularly expect such a premenstrual gain. Probably this is due largely to retention of water. A good many women state that their urination becomes quite scant just before the periods.

If the obesity is of the thyroid type, I begin by giving small doses of thyroid, increasing the dose gradually until the pulse increases to about 90 and there are no signs of thyroid intoxication. The increase

should be made slowly and the dose should always be within the limits of safety. My usual practice is to give 1/5 grain (13 mgm.) three times a day. Every fifth day the dose is increased by 1/5 grain, until the point of tolerance is established. Kremer³ quotes Julius Bauer¹² to the effect that a foreign protein adds to the body's tolerance for thyroid, and mentions his own experience with Aolan. I have had very little experience with this.

In pituitary cases we give pituitrin in such doses as the patient can tolerate without causing severe intestinal reaction. We determine this point by giving three or five or more units and watching the pulse rate and signs of intestinal activity.

The three reactions that follow pituitrin are the vascular, which consists of a blanching of the face occurring within a very few minutes after the injection; the intestinal reaction, which consists of cramps, sometimes followed by a bowel movement, within twenty minutes after the injection. We aim to give less than will produce a bowel movement, but do aim to cause some cramps. The general reaction consists of a general nervous upset, sometimes accompanied by violent nervous outbreaks, wild weeping and even maniacal symptoms. The dose is always kept far below the amount necessary to produce these general reactions. Whole pituitary is given by mouth, in doses of 3 grains (0.2 Gm.), three times a day, using an enteric-coated pill.

Some women showing pronounced degrees of under-development of the osseous system and girdle obesity—the bilobar type, of Engelbach—preadolescent as to time of onset—have a very small tolerance for pituitrin and can only take two or three units to begin with, but soon acquire a tolerance that admits of five units. It might be argued from this that the body acquires a tolerance for pituitrin, just as it does for some drugs, but this is not true. The average patient who can take ten or even fifteen units at the beginning needs to have the dose reduced to five units or less after varying periods of treatment.

I have, of late, given the anterior lobe as well as the posterior. It undoubtedly stimulates proteid metabolism. Injections of pituitrin are repeated two or three times a week, the frequency depending somewhat on the patient's convenience. Antuitrin is not given oftener than twice a week.

ILLUSTRATIVE CASES

Case 1: Mrs. W., a widow, age sixty, was referred by Dr. Frank Maha, of Dundee, Ill. Her chief complaint was obesity. Eleven years before, at the age of forty-nine, she had weighed 135 pounds. At the time I first saw her she weighed 212½ pounds. The gain had been gradual at first, had increased somewhat more rapidly after the age of fifty-three and had been particularly rapid in the past three years.

During the past six months she had been troubled by pains in her feet, legs and back. During the past year and a half she had perspired very freely. There had been some perspiration about her head at night. The skin on her palms and soles was very dry and cracked somewhat about her nails, even in the summer months. It was, of course, very much worse in the autumn and winter, during cold weather.

Her past history showed that she was a thin, sickly baby and was of about average weight up to the age of 49, when she suddenly stopped menstruating, following the death of her husband. Her menstrual periods began at 11, were regular, of the 28 day type, lasting two or three days, and were quite profuse. At the age of sixty she was still troubled by a good many hot flashes.

Examination: Temperature, 98.6°F.; pulse, 81; blood pressure, 160/95; height, 60½ inches; weight, 212½ lbs. Her fat was of the girdle type, with pituitary pads on the thorax, and four folds on the abdomen. There was also some padding on the dorsum of the hands and feet and in the dorsal cervical and supraclavicular regions. The skin on her palms and soles was very dry and there was some cracking about the nails, which were very brittle. She had a moderate degree of flat-foot, which accounted for the pain in her back, legs and feet. The examination was otherwise negative.

She tolerated 50 grams of galactose without glycosuria; the basal metabolic rate was plus 12 percent; her renal function showed a return of 65 percent; the total nitrogen in her urine was 10.3 grams. Her blood-chemistry study showed: sugar, 96; N.P.N., 30.8; calcium, 10 plus; uric acid, 4.7; chlorides, 330.0.

Her measurements were:

	10-13-30	11-24-30	3-20-31
Rt. calf	42 Cm.	39.75 Cm.	37.5 Cm.
Rt. thigh	72	66	63.7
At the trochanter	121	115	107.5
Umbilicus	125	110	95
Chest above breasts	106	100	97.5
Neck	36	34.5	

She was classified as a combination of thyroid and pituitary obesity. Her diet was restricted as to carbohydrates and fats, but she was not put on a weighed diet. She was given thyroid, 1/5 grain (13 mgm.) t.i.d. At the present time

she is able to take 1 grain (64 mgm.) per day. She was also given whole pituitary 3 grains (0.2 Gm.) t.i.d. She was given pituitrin, 5 units, and antuitrin twice a week. There was a steady decrease in weight. On March 13 she weighed 181 pounds; her pulse was 85; blood pressure, 136/78.

Blood-chemistry studies on March 20, 1931, showed: sugar, 106.3; uric acid, 2.9; calcium, 8.4.

Case 2: Mrs. H., age 22, consulted me in October, 1929, complaining of obesity which began rather suddenly, after an attack of dermatitis, in September, 1928. At that time she weighed 130 pounds; by January, 1929, she weighed 160 and, at the time she came under observation, she weighed 180 pounds. There were no other complaints. She had no headaches, no polydipsia nor polyphagia.

Her menstrual periods began at 14, but she had only two or three periods each year up to the age of sixteen, and they were scant and painful until after marriage and an abortion. She had one period in December, 1928 and another in March, 1929. Since that time they have occurred at intervals of about 45 days.

Her family history was without significance, except that her parents were both rather below the average height. One sister was obese; her two brothers were of average height and slender. Her past history was without clinical interest.

Examination: The patient was 5 feet 2 inches in height and weighed 180 pounds. She presented the typical bilobar hypopituitary configuration, with small, pointed, tapering fingers, having small nails. Her hair suit was moderately heavy and quite fine and oily. The pubic hair was feminine in its type of distribution. The upper lateral incisors were very small, somewhat pointed and placed somewhat posterior to the normal tooth line. Her breasts were well developed and pendulous. Her abdomen presented the typical pituitary folds, four in number. There was some padding on the sides of the thorax, and enormous trochanteric fat pads.

She was in Wesley Memorial Hospital from October 19 to November 16, 1929, where her diet averaged about 100 Gm. of carbohydrates, 85 Gm. of protein and 50 Gm. of fat, giving 1190 calories.

Her weight on entrance was 184; on leaving the hospital it was 169¼ pounds.

Her measurements were as follows:

	10-4-29	11-15-29
Chest	95 Cm.	90.75 Cm.
Abd. at Umbilicus	90	78.5
Trochanter	119	111.5
Rt. thigh	77	58.5
Rt. knee	49	42.5
Rt. calf	38.5	35.75
Rt. ankle	22.5	21
Upper Rt. arm	32.5	28

Dr. Fearrington, the interne who made these measurements, repeated those of November 15, as he could not believe that there had been the reduction in size which his measurements showed.

On October 4, 1929, the basal metabolic rate was minus 16 percent.

Blood chemistry:

Non-protein nitrogen	37.5
Uric acid	3.45
Chlorides	10.3

Urinalysis:

Reaction slightly acid to litmus	
Total volume	1.012
Total nitrogen	8.646
Urea	6.063
Ammonia	.579
Creatinin	1.76

Blood count (date 10-20-29):

Red cells	4,200,000
White cells	8,000
Hemoglobin	82 to 85 percent

The blood Wassermann test was negative.

The National Pathological Laboratories reported as follows:

"Stereoscopically and on flat films, the sella turcica presents a peculiar appearance which is rather difficult to describe. One may infer that the capacity of the sella is decreased, due to bony encroachment on the area. It almost seems as though there were several successive layers of bone within an original bony limit which is normal in size and shape. It might be spoken of as a laminated reduction, not unlike onion layers. This sella sets rather deeply and its margins seem to be thinned out and somewhat sharpened. All other portions of the base of skull are quite in accord with normal. The cranial vault also presents normal x-ray features. The bones of the face, jaws and upper spine seem to be normal."

After returning to her home her diet was quite low in calories, averaging about 735 per day.

The total nitrogen in the urine was determined at rather frequent intervals and was found to coincide rather closely with her reported protein intake. Her blood chemistry, August 3, 1930, was reported as follows: sugar, 101.1; N.P.N., 29.6; uric acid, 3.7.

Medication has consisted of small doses of thyroid, by mouth, and whole pituitary 3 grains (0.2 Gm.) t.i.d., by mouth. Pituitrin, 5 units, was given about twice a week; Antuitrin was given about once a week; ovarian residue was usually combined with the pituitrin; Estrogen was used every four weeks instead of ovarian residue.

Results of treatment: Her weight was reduced to 150 pounds. The menstrual periods became normal in amount and the intervals were reduced to thirty-five days. She usually gained a few pounds just before each period and lost them soon after the period was over. Apparently the gain was due to the retention of water. Saltygan was given a few times, with a loss of two or three pounds within the next three days. On discontinuing treatment she promptly gained weight. Her periods have occurred at thirty-five-day intervals for several months, with little or no treatment.

Case 3: A married woman, age 37, was re-

ferred to me by Dr. Geo. A. Wiggins, of Milan, Illinois. She complained of obesity, lack of "pep" and a desire to avoid physical exertion. She had experienced some vertigo and two transient attacks of blindness. There was no polydipsia nor polyphagia and no diurnal somnolence. She did admit that her appetite was "too good." Her past family and menstrual history was without significance. She was ignorant of her developmental history, except that she remembered that she had always been large and heavy.

Examination: She was 67 inches in height and weighed 280 pounds. She had gained 80 pounds since marriage, seventeen years before. Her blood pressure was 185/115; pulse, 98; temperature, 99.5°F. (Her fever and tachycardia were believed to be due to an acute upper respiratory infection.) Her obesity was of the girdle type, with small wrists and ankles; her abdomen presented four folds; there was some narrowing of the palpebral fissures and considerable dorsal cervical padding; the skin on her face was rough and showed some acne. Otherwise the examination was negative.

Her blood chemistry study showed:

Sugar	98
N.P.N.	37.5
Calcium	10.4
Uric acid	4.8

(Uric acid is usually high in the presence of hypopituitarism, particularly of the anterior lobe.)

The renal function gave a return of 40 percent of the dye; the basal metabolic rate was plus 12 percent; she took 50 Grams of galactose without glycosuria; the total nitrogen was 16.4 Grams in 24 hours.

The blood count showed 8000 leukocytes.

She was asked to put herself on a diet consisting of 150 Grams of carbohydrates, 100 Grams of protein and 75 Grams of fats, giving a total of 1675 calories. This was to be continued until her doctor returned and could supervise her treatment. There was evidently little or no loss in weight on this regime, which was continued 70 days.

Dr. Wiggins began her treatment December 1, 1930. She was given thyroid, 1/5 grain (13 mgm.), three times a day. She was able, later to tolerate 1/2 grain (32 mgm.) t.i.d. She was also given whole pituitary, 3 grains (0.2 Gm.) t.i.d. and Pituitrin, 5 units twice a week.

From December 1 to February 21, she lost 38 pounds. Her blood pressure on the latter date was 142/90; pulse, 72; blood chemistry: sugar, 127.3; N.P.N., 37.1; uric acid, 2.5.

She was walking several miles every day and felt very much inclination for physical exertion. There has been no recent attacks of vertigo or blindness. In every way she reported herself as feeling very much better. It will be noted that she lost no weight on dietary restrictions alone, but when pituitary and thyroid medication was added, she lost nearly one-half pound per day.

REFERENCES

- 1.—Fellows, H. H.: Studies of relatively normal obese individuals during and after dietary restrictions. *Am. J. Med. Sc.* 181:301-12, Mar., 1931.
- 2.—Strang, J. M., McCluggage, H. B., and Frank, A. Evans: The nitrogen balance during dietary correction of obesity. *Am. J. Med. Sc.* 181:36-49, Mar., 1931.
- 3.—Kremer, D. N.: Obesity, observations on treatment by dietary measures. *Ann. Int. Med.* 4:909-17, Feb., 1931.
- 4.—Rony, Hugo R.: Personal communication; *Ill. M. J.* 59:302-15, April, 1931.
- 5.—McPhedron, Wm. Fletcher: "Obesity" — Tics "Practice of Medicine," Vol. ix, page 40.
- 6.—Strouse, Solomon: Studies on the metabolism of obesity. *Arch. Int. Med.* 34:267-74, Sept., 1924.
- 7.—Strouse, Solomon, and Wang, C. C.: The metabolism of obesity. *Arch. Int. Med.* 36:397-417, Sept., 1925.
- 8.—Lawrence, C. H., and Rowe, A. W.: Studies of the endocrine glands: The thyroid. *Endocrinology* 12:377-450, July-Aug., 1928.
- 9.—Engelbach, Wm.: Personal communication.
- 10.—Morris, Rogers: The "thyroid heart" with low basal metabolic rate. *Am. J. Med. Sc.* 181:297-301, Mar., 1931.
- 11.—Rowe, Allen Winter: Studies of the endocrine glands: 1.—A general method of the diagnosis of abnormal function. *Endocrinology* 12:1-54, Jan.-Feb., 1928.
- 12.—Bauer, Julius: Ueber Fettsucht. *Wien. klin. Wchnsch.* 39:233-37, Feb. 25, 1926.
- 13.—Bennett: Personal communication.

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CONCEPTION OF INSANITY

There is a frequent conflict between medical and legal conceptions of insanity. The law admits that a man with one fixed delusion may be sane on every subject except when he touches upon the delusive thought, and some jurists consequently argue that he can be considered sane before or after a crime is committed, but insane during the act. From a medical viewpoint, such an argument is unscientific, for, if delusive ideas are apt to originate in a brain, the function of its constituent elements is certainly disturbed. In such a brain one certain delusion may be formed and remain fixed, but by the very reason of this fact this brain must be considered diseased and misconception with misinterpretations may be manifest at any moment. A person thus affected should by no means be considered "responsible before the law," before or after the crime.—DR. A. GORDON, of Philadelphia, in *Med. Times*, Dec., 1930.

Cardiovascular Syphilis in the Negro*

(A Study of Fifty Cases, with Necropsy)

By Jack C. Norris, M.D., Atlanta, Ga.

Associate Professor of Pathology, Emory Univ.

THIS study was made to determine the common clinicopathologic findings in the negro suffering from cardiovascular syphilis. Fifty cases were reviewed. Every case was necropsied.

Of the 50 patients, 12 were females and 38 were males. Forty-two (42) were well nourished; 3 fairly well nourished; 2 were emaciated; and 3 were obese. All, except 3, were well developed physically, and of these one had congenital syphilis and another tuberculosis.

The average stay of the patient in the hospital was seventeen days. The total hospital days in the series were 887.

Thirteen (13) cases occurred in 1928; 22 in 1929; 5 in 1930; 2 in 1927; and 3 in 1926. The dates have no significance, as the cases were selected at random.

Nearly all of the patients were married and 14 gave a history of miscarriage. The ages of the patients averaged forty-one and one-fifth years. The oldest was seventy-five years of age (one patient); the youngest was three years of age; 38 patients were below the age of fifty years; 22 were less than forty years old; only 8 were beyond the age of fifty. All patients, except one, were dead before the age of sixty-five years; two patients were below the age of twenty-one.

The chief complaint of 32 patients was "shortness of breath and swelling of the feet." The second most frequent complaint was "pain in the chest." The other ailments complained of were: cough, weakness, hoarseness, abdominal pain, jaundice, heart flutter and swelling of the abdomen. Upon careful inquiry into the history it was revealed by 35 patients that "pain" was a common experience. Most often it was in the chest and usually substernal; frequently, it was dull and aching in type; often it was sharp, stabbing and radiating.

Twenty-four (24) of those studied had a primary sore. It was noted that, in those who remembered the date of the chancre's occurrence, 5 patients had vascular symptoms after a lapse of twenty-five years; 1

after twenty years' lapse; 5 between fifteen and twenty years; 11 were ill before a lapse of fifteen years had passed. The average year in which the vascular break occurred was seven years following the primary lesion. One patient had a sore only two years and another six months before death.

PHYSICAL FINDINGS

The heart, according to percussion and auscultation, was enlarged in 42 patients, the common enlargement being to the left and outward, and the measurements averaged 12 centimeters. Nineteen (19) patients had measurements that exceeded 12 centimeters.

The blood pressure records were interesting. The average systolic pressure was 145 millimeters; the diastolic 68 millimeters. While these figures indicated a remarkable pulse pressure, it must be remembered that they were influenced by the fact that there were patients in the series whose diastolic pressure was zero. This fact would mean that the diastolic pressures, without complete insufficiency of the aortic valves, would approach normal. Eliminating those with zero diastolic pressure, the figures indicate that the average pressure in the series was 125 millimeters systolic and 68 millimeters diastolic. Of the series, 21 had a pressure below 140 millimeters; 23 had pressures ranging from 140 to 200 millimeters; 5 had pressures above 200 millimeters; 1 was a child and no pressure is recorded; 6 had a zero diastolic pressure.

The pulse rate averaged 99 beats per minute. Ten (10) of the series had an irregular pulse. Bradycardia was present in 2 patients.

The ophthalmologic studies revealed that 15 patients had sclerosis of the retinal vessels. Usually, this finding was referred to as a slight arteriosclerotic change. Two (2) patients had hemorrhages in the retina; both had elevated blood pressure and positive Wassermann tests and one had a primary sore twenty years previously; 2 had optic atrophy; 8 patients with sclerosis of the vessels had elevated blood pressure.

The ophthalmologic findings in these

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cases, as observed by Dr. Calhoun and assistants, checked correctly with the histologic studies of the tissues removed at autopsy. Other eye findings were; optic atrophy, in 2 cases; glaucoma, in 1; and retinal hemorrhage in 2.

Upon auscultation, murmurs were heard within the hearts of 37 patients. Twenty-three (23) had diastolic murmurs only; 14 had systolic mitral murmurs; and 5 had both mitral and diastolic. The figures show that murmurs are found in 70 percent of vascular syphilitic patients.

Six (6) members of the series had tumor masses: 2 within the abdomen and 4 within the thoracic cavity.

Thirty-eight (38) patients had edema of the extremities.

LABORATORY FINDINGS

The hemoglobin estimate showed an average of 73 percent.

In 35 instances of the series, the urine reacted positively when tested for albumin.

The blood smears showed an average lymphocyte count of 28 percent: 18 smears showed over 30 percent lymphocytes.

The Wassermann test was positive in 43 cases, or 86 percent of the patients.

PATHOLOGIC FINDINGS

According to weight, the heart was enlarged in 38 patients (350 grams is here considered a liberal weight for the heart in these patients). The average weight of the heart was 544 grams; 13 hearts exceeded 700 grams; 28 exceeded 500 grams in weight.

There were 2 hearts that weighed 900 grams each. These two patients were aged 41 and 30 years, respectively; both had aortic lesions that showed syphilis; one had a negative Wassermann test and hemorrhages in the retina. Thus, one case was purely syphilitic, the other mixed with arteriosclerosis.

There were 5 hearts that weighed from 800 to 890 grams. Four (4) of these patients had four-plus Wassermann tests; 2 showed sclerosis of the vessels in the histologic sections; 3 had slight blood pressure elevation; 2 were normal; 2 had chancres, one twenty years and the other twelve years previous to the break. The ages of these with large hearts were 40, 37, 27, 30, and 50. Three had negative eye grounds; one slight sclerosis; and the other optic atrophy (age fifty).

The valve lesions found involved leaf-

lets of the aortic and were present in 26 cases, all with evidence of insufficiency. Of these, 13 had an insufficiency due definitely to valve damage. In the remainder the insufficiency was evidently the result of an aortitis, plus valvular damage.

Forty-six (46) had lesions in the aorta. These lesions were usually observed to be elevated, somewhat irregular, smooth, edematous areas—at times striated and silvery, more often whitish, and occasionally having a blue tinge. Usually the diseased areas were at the base of the aorta. In several, however, the lesions were above the base and distinct and separate. The measurements of the aorta usually disclosed a widening of the circumference, with an average width of 7.8 centimeters. Eighteen (18) aortas exceeded 8 centimeters in diameter; all in adults exceeded 6.1 centimeters in diameter.

The coronary vessels were involved in 10 cases, the involvement usually being plaque formations within the vessel wall and a puckering of the ostia.

Aneurysms were found in 12 patients. One was posterior to a leaflet of the aortic valve; another was of the innominate artery and had ruptured into the trachea. Usually the aneurysms were about the curvature of the aorta and extended to the left, upward and outward. Seven (7) of the tumors had ruptured. Only five of these hearts exceeded 350 grams in weight. Generally, the heart was not enlarged if an aneurysm of the aorta existed.

The weights of the various organs are interesting. The averages are, in sequence, as follows:

Lungs: Right, 563; left, 478 grams. The most common finding was edema. The heaviest weight was a right lung which weighed 1,020 grams.

Liver: 1,593 grams. Commonly the findings were that of chronic passive congestion. Three livers were macroscopically syphilitic. One was of the lobar hepatatum type. The largest liver weighed 2,600 grams.

Kidneys: Right, 169 grams; left, 168. They were usually enlarged and congested. Histologically, there were often round-cell infiltrative areas that were undoubtedly syphilitic.

The chemistry studies on the blood of the patients gave the following averages: Sugar, 80.5 mgm. per 100 cc.; non-protein nitrogen, 48 mgm. per 100 cc.; creatinine, 1.2 mgm. per 100 cc.

Only one patient had excessive blood sugar (200 mgm.). Five (5) patients had nitrogen retention that exceeded 100 mgm., the highest reading being 300 mgm. This man was sixty years of age and evidently had both syphilis and arteriosclerosis.

The common histologic findings were present in the aorta and kidney, and usually were round-cell infiltration about the vessels and round-cell collection elsewhere. This was noted in sections from 35 of the patients. The musculature of the hearts usually showed cloudy swelling of the fibers, fibrosis and hypertrophy. Usually, if search was made long enough, small areas of round cells—very suggestive of syphilis—were found. One heart had prominent gummas within the left muscular wall.

The clinical diagnoses in the series were: Aortic insufficiency in 15 cases; aortic syphilis in 12 cases; aortic aneurysms in 9 cases; syphilis (including myocarditis) in 9 cases; hypertensive heart disease in 5 cases.

Cerebrospinal syphilis was present in 6 cases: 2 tabetic, 1 parietic, 1 cerebral embolus, and 2 unclassified.

Ninety-six (96) percent of the cases were diagnosed correctly. They were all observed in the medical service of Dr. James E. Paullin, professor of clinical medicine, Emory division of Grady Hospital, Atlanta, Georgia.

Twelve (12) patients admitted that they had had treatment with arsphenamine and mercury.

SUMMARY

1.—In this study, syphilis is more common in males than in females.

2.—A primary lesion often occurred. It was found, in this series, to have been present in 49 percent of the patients.

3.—Shortness of breath, edema and chest pain are suggestive clinical diagnostic aids.

4.—Cardiovascular involvement is uncommon in persons under twenty-one years of age.

5.—The average age of the patient with a vascular break is forty-one years.

6.—On an average, vascular symptoms

occur seven years after the chancre.

7.—The break may occur any time up to twenty-five years after the sore; seldom thereafter.

8.—The Wassermann test is usually positive in vascular syphilis.

9.—Cerebrospinal syphilis was uncommon in this series.

10.—The blood pressure does not seem to be elevated. However, it may not infrequently be 145 mm., systolic.

11.—The pulse pressure is usually high.

12.—The hemoglobin is diminished.

13.—The pulse is rapid in rate.

14.—The heart is usually enlarged, as ascertained both by percussion and by its actual weight.

15.—Sclerotic retinal vessels suggest arteriosclerosis and, when moderate, can be associated with syphilis. If hemorrhages are present in the retina, they suggest arteriosclerosis more than syphilis.

16.—Arteriosclerosis and syphilis are often associated in the negro.

17.—Diastolic aortic murmurs are present in vascular syphilis in more than fifty percent of the hearts.

18.—Common pathologic evidence of aortic syphilis is most often found at the aortic base and upon the valves.

19.—The circumference of the aorta is usually increased.

20.—Aneurysm is not infrequent, being present in 21 percent of the cases of this series.

21.—The heart is usually not enlarged, if aneurysm of the aortic arch is present.

22.—The coronary arteries are involved in 20 percent of the cases.

23.—Blood sugar volume is just at its normal level. Hypoglycemia is rare. The nitrogen balance is usually undisturbed, unless there is an associated arteriosclerosis.

24.—The common histologic findings were round-cell collection about the vessels, hypertrophy of the heart muscle fibers, and fibrosis.

25.—In carefully studied cases, the diagnosis can be made in practically every instance.

MAN AND THE UNIVERSE

If the universe is without life and intelligence, then man, made of the same substance, is no greater. He is not alive now and never can be.—
MIRIAM I. WYLIE, in "Life's Response to Consciousness."

The Gastroduodenal Catheter

By F. D. La Rochelle, M.D., Springfield, Mass.

WHILE clinicians all over the world have participated in the development of the duodenal tube, the work of Einhorn, Lyons, Rehfuß and Levin has been of such importance as to make this a distinctly American contribution to clinical medicine.

There are on the market today a number of satisfactory duodenal tubes or catheters, but since the Levin tube¹ possesses all the advantages of any, and none of their disadvantages, others are now largely of historical interest.

Levin has demonstrated conclusively that it is not necessary to have any kind of metal tip or stylet, and thereby has added greatly to the safety of duodenal intubation, as well as to the ease with which the tube can be introduced. This tube may be passed by way of the mouth, but it is preferable to use the nostril. If desired it can be fixed with a strip of adhesive and left in place over a period of days. Under these conditions, it is well to remove the tube once or twice daily, for the purpose of cleansing and to use the left and right nostrils, alternately. This permits cleansing of the nostril and treatment with a bland ointment or oil. If it is found necessary to use the tube constantly for several days, it is wise to give small doses of "cold vaccine," to prevent infection of the nasal and pharyngeal mucosa.

THE LEVIN TUBE

This tube is 45 inches long and comes in sizes ranging from Nos. 12 to 18, French scale. The small tube can be used in infants and persons with nasal obstruction. It can readily be adapted to a 50 cc. Luer syringe.

The distinct peculiarities of the Levin tube are:

- 1.—Absence of a metal tip and the quality of the rubber facilitates its introduction through the mouth or nostril.
- 2.—When suction is applied, the walls of the tube will not collapse.
- 3.—The openings are not likely to become blocked by mucus or food, on account of their size and the velvet-eye terminal end.
- 4.—There is no need for a stylet.

5.—It can easily be introduced through the nose or mouth, even in an anesthetized patient.

6.—It is less likely to curl upon itself in the stomach.

7.—The tube readily passes through the pylorus.

8.—The tube is opaque to x-rays.

METHOD OF INTRODUCTION

With a little practice this tube can be passed with a minimum of inconvenience. In an anesthetized patient it usually suffices to lubricate the tube and pass it gently through the nostril and, if necessary, guide the tip with the finger in the pharynx. Once it is engaged in the esophagus, it readily finds its way into the stomach.

In a conscious patient, when the tip touches the pharyngeal wall, the patient is asked to swallow and, if necessary, is given a little water to facilitate engagement of the tube. When it is desired to have the tube pass the pylorus, it is only necessary to adjust the marking on the tube as to length and have the patient lie on the right side; ordinarily the tube reaches the duodenum within an hour.

INDICATIONS FOR USE OF DUODENAL TUBE

This tube can be used to determine the patency of the nostrils, esophagus, cardia and pylorus. When the tube is passed by an experienced person, especially if the test is repeated, failure to reach the duodenum is presumptive evidence of pyloric obstruction. The fasting contents of the stomach can be readily obtained for examination, or a test meal can be removed, in whole or in fractions, for examination, after the technic of Rehfuß. A distinct advantage of the duodenal tube over the conventional stomach tube is that it can be left in place and, since it causes a minimum of discomfort to the patient, tests can be repeated at will.

The duodenal and jejunal contents can be readily obtained for examination and, by washing the duodenal mucosa with magnesium sulphate or peptone solution, the sphincter of Oddi can be relaxed, allowing a flow of bile into the duodenum and out through the tube, after the technic of Lyons.

The whole duodenal contents can be examined for pancreatic ferments. Macroscopic examination of the contents of the upper gastrointestinal tract sometimes suffices to determine arrest of peristalsis in peritonitis and intestinal obstruction.

Non-surgical biliary drainage with the duodenal tube has firmly established itself in clinical practice² and no examination of the digestive function is complete without this. It has an advantage over cholecystography, in that the examination is inexpensive; but this test should never be relied upon to the exclusion of others. The best results in diagnosis of biliary passage conditions are obtained by carrying out all the established tests and correlating these with the clinical history. While it is true that cholesterol crystals and calcium bilirubin in the bile are highly suggestive of cholelithiasis, one cannot long fail of experiencing disappointment, if this test is relied upon exclusively.

THERAPEUTIC INDICATIONS

With this tube, the stomach can be washed with water or medicated solutions and poisons can be removed or neutralized. The stomach and upper intestinal tract can be drained and water reintroduced. This latter procedure is not so satisfactory, however; under certain conditions, notably peritonitis and intestinal obstruction, the function of the upper gastro-intestinal tract is reversed, so that it excretes instead of absorbs and, if fluids are introduced, more harm than good will result. It is better to give salt solution and dextrose by hypodermoclysis.

After abdominal operations the patient should never be allowed to vomit. The tube should be introduced immediately after operation, the stomach cleansed and the tube left in place; or the procedure repeated as often as necessary. This prevents distention of the upper gastrointestinal tract, greatly adds to the comfort of the patient, removes poisonous secretions and relieves tension on the suture line, in case the viscera have been opened. This procedure has largely replaced surgical jejunostomy.

In the diagnosis and treatment of gastroduodenal ulcer, the duodenal tube is indispensable. In biliary colic it relieves the nausea and, at times, promotes the flow of bile in the duodenum and relieves the pyloric spasm; used with morphine and hot

applications to the abdomen, it is a very satisfactory treatment for acute colic.

In urology³ it has a wide field of usefulness in the preoperative and postoperative treatment of cases showing a relatively acute retention of nitrogenous waste products and for the prompt relief of severe acidosis.

Lyons has shown that biliary drainage enhances liver function and, since the liver is the organ of detoxication, it follows that the maintenance of maximum hepatic function is of value in cases presenting symptoms of toxemia. When intestinal evacuation is desired, sodium sulphate can be introduced through the tube.

Probably the greatest aid to the urologist is its use in controlling the acid-base balance of the blood. By introducing large amounts of water, lavage of the entire gastrointestinal tract may be effected. However, this should never be attempted when there is any marked disturbance of peristalsis. Lavage diminishes intestinal putrefaction, and the flora of the intestinal tract can be changed at will by the use of lavage and implantation or alteration in diet. In uremia, lavage with the duodenal tube is almost a specific for hiccup.

Jackson⁴ used it to introduce fluids and iodine, in the treatment of goiter.

In postoperative ileus⁵ it is often life-saving. It is best to use it as a prophylactic for this condition. If, after every stomach operation, the tube is introduced and the stomach kept clean and empty and loss of fluid replaced by hypodermoclysis, postoperative ileus will not be often encountered.

In jaundice⁶, excellent results were obtained.

For nausea, vomiting and toxemia of pregnancy, Levy-Solal and A. Hedges⁷ demonstrated the well-known effects of gastric and duodenal lavage in these conditions.

By introducing two tubes, one through each nostril, the stomach and duodenum can be catheterized at the same time⁸.

Dominici⁹ obtained duodenal contents for determining iron in the bile.

In uremia¹⁰, excellent results were obtained.

Polacco¹¹ used this procedure for demonstrating the effect of cholagogues.

Tape worms¹² have been removed by using duodenal intubation.

Garin et al.¹³ used the duodenal tube to obtain pure gastric juice.

The more experience one has with the

duodenal tube, the more indications manifest themselves, and so satisfactory are the results that no clinic can be considered complete without this useful addition to practical medicine.

REFERENCES

- 1.—Levin, A. L.: New gastroduodenal catheter. *J.A.M.A.* 76:1007, April 9, 1921.
- 2.—Bockus, H. L., et al.: Comparison of biliary drainage and cholecystography in gallstone diagnosis. *J.A.M.A.* 96:311-17, Jan. 31, 1931.
- 3.—McCarthy, J. F., Killian, J. F. and Travers-Stepita, C.: The duodenal tube: Its use in surgical urology. *Southern Med. J.* 21: 657, August, 1928.
- 4.—Jackson, Arnold S.: The duodenal tube as an aid in the surgical treatment of exophthalmic goiter. *Ann. Surg.* 88:21, July, 1928.
- 5.—Einhorn, Max: The duodenal tube as a help in the treatment of postoperative acute gastric ileus after gastroenterostomy. *Med. J. & Rec.* 130:327-29, Sept. 18, 1929.
- 6.—Bengolen, A. J.: Results obtained by duodenal intubation in surgical jaundice. *Lyon chir.* 26:818-23, Nov.-Dec., 1929.
- 7.—Levy-Solal and Haddjes, A.: On several cases of duodenal intubation in affections of the subhepatic passages, during the course of pregnancy. *Paris méd.* 1:324-27, April 7, 1928.
- 8.—Poorean, E. and Steepoe, V.: Simultaneous gastro-duodenal intubation. *Bull. et mém. Soc. méd. d. hop. de Bucarest* 9:206-207, December, 1927.
- 9.—Dominici, G.: Concerning the amount of iron in the bile during normal and pathological conditions. *Arch. per le sc. med.*, Torino, 53:390-400, July, 1929.
- 10.—Auguste, C.: Duodenal intubation in the treatment of uremia. *Bull. et mém. Soc. d. hop. de Par.* 53:1313-17, November 25, 1929.
- 11.—Folacco, E.: Examination of the permeability of the biliary pathways by duodenal catheterism. *Arch. ital. di chir.*, Bologna, 19:481-95, 1927.
- 12.—Shiffman, V. B.: Expulsion of tape worms in children by means of the duodenal tube. *Vrach. Gaz., Leningrad.* 33:2819-22, 1929.
- 13.—Garin, C., Bernay and Verillon: The taste test and rapid production of pure gastric juice. *Lyon med.* 142:584-90, November 18, 1928.

89 Belmont Ave.

Coronary Thrombosis*

By Dietrich Klemptner, M.D., Chicago, Ill.

A GREAT deal has been written and spoken in the last decade about coronary thrombosis. We have learned to recognize the condition more promptly and a good many lives have been lengthened and needless operations have been prevented. As a result of the publicity, even the daily papers have largely ceased calling it "acute indigestion."

Coronary thrombosis is a distinct clinical and pathologic entity, though several writers persist in calling it a complication of angina pectoris or coronary sclerosis. It is, of course, true that a close relationship exists between these various conditions.

ANGINA PECTORIS

Angina pectoris cannot be diagnosed by the pathologist. Extensive coronary sclerosis is found in patients who have had no angina pectoris; and a few cases of angina pectoris have been reported where there was no sign of coronary sclerosis. Angina pectoris is closely associated with coronary sclerosis and is a valuable clinical sign of a degenerated arterial system, but it is not coronary sclerosis.

According to Pal, angina pectoris is a vasoconstriction of the coronaries and an ischemia of the myocardium that is the result of a perverted reflex. The afferent impulses of the reflex are started in the roughened intima of the sclerotic coronar-

ies, pass to the cord by way of the sympathetics, produce efferent impulses that are carried to the heart by the vagus nerve and cause constriction of the coronaries.

The aorta has the same innervation as the coronaries, and lesions of the aorta may also bring about a constriction of the coronaries and the clinical picture of angina pectoris. When the nervous pathways along which this reflex travels become well worn, the field from which afferent impulses may originate widens to take in the abdominal and pelvic viscera, and may extend to the skin, so that a cold wind blowing on the face may bring about an attack of angina pectoris. Cases are reported where attacks of angina stopped, following the removal of a diseased appendix or an enlarged prostate. It is probable that other factors besides the postoperative rest are responsible for bringing about this effect.

CORONARY SCLEROSIS

Coronary sclerosis is the etiologic factor in about 90 per cent. of the cases of coronary thrombosis. Twenty (20) percent of the cases of sclerosis develop thrombi. Coronary sclerosis may produce in the heart muscle the same changes as thrombosis. It is only natural, therefore, that a certain percentage of cases of coronary sclerosis will give all the clinical manifestations of thrombosis, from the mildest signs to sudden death. Cases that had all

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the typical signs of coronary thrombosis have shown, at the autopsy, only arteriosclerosis and old, healed infarcts. It is, therefore, justifiable, in the age groups where sclerosis may be a factor, to speak of sclerosis, with or without thrombosis.

ANATOMY AND PATHOLOGY

The coronary arteries are not endarteries and possess capillary and precapillary anastomoses that improve with advancing age. This explains the paradoxical phenomenon that old patients are better able to withstand a gradually developing thrombosis than are younger ones. The thebesian system—the system of canals connecting the capillary circulation of the heart with the chambers of the heart—has been found to carry on an intracardiac circulation sufficient to sustain life, in cases where the coronaries were completely obliterated.

Both the right and left coronaries supply portions of both ventricles and the septum. The neuro-muscular system has its own blood supply. The artery that is most commonly the seat of thrombosis is the descending branch of the left coronary, which supplies the anterior wall of the left and part of the right ventricle; also the anterior portion of the interventricular septum. That explains why aneurisms of the heart are commonly found at the apex and why mural thrombi commonly form simultaneously in both ventricles.

The infarcts are readily recognized, being of greyish or yellowish color and sharply demarcated. The size varies greatly, but is never so large as is the area supplied by the occluded artery. The infarct is of wider extent toward the endocardium than toward the pericardium and the myocardium generally exhibits one or more fibrous patches, the result of past obliteration of numerous capillaries or of branches of the coronaries, not of an inflammatory process—a myocarditis.

ETIOLOGY

The commonest etiologic factor is arteriosclerosis. It is easy to understand how the narrowing of the lumen of an artery and roughening of the intima will cause a slowing down of the blood current and the formation of a clot. The common age of the sufferers is in the sixth and seventh decades. Thrombosis at a higher age is rare and at a lower age it will affect people only if they suffer from malignant hyper-

tension, nephritis or poor heredity—conditions that speed up the normal wear and tear of the arterial wall.

Studying the incidence by sex, we find a striking fact: Four to six males suffer from coronary thrombosis to one female. What mechanism keeps the blood from clotting in the coronaries of females?

There is a difference in the reaction to some diseases of the blood in the two sexes. We take it for granted that, during the child-bearing period, woman tolerates better the loss of blood than man; we know that, following childbirth, a woman's blood clots easier; many a woman with rheumatic heart disease develops embolic phenomena at this stage. Is it not possible that, at a later age, there is a mechanism peculiar to the female sex that operates against the formation of arterial thrombi? Does it bear a relationship to the endocrine glands? It would certainly be desirable to confer this relative immunity upon the male sex, if that were possible.

Syphilis does not play an important part in the causation of coronary thrombosis; it attacks the aorta and leaves the coronaries alone. At times, in the presence of syphilitic aortitis, the coronaries may become narrowed or obstructed at their mouths and infarcts may result.

In White's series, syphilis was present in $4\frac{1}{2}$ percent of the cases. Warthin believed that the cases with microscopic syphilis will bring the percentage up to ten.

Hypertension is a powerful factor in the production of arteriosclerosis, but is only indirectly concerned in the causation of coronary thrombosis. Thromboangiitis obliterans is probably not rare, if looked for.

I recently saw the following case:

D. K., 72 years old, was seized with an agonizing sense of suffocation while walking on the street. He managed to climb, unaided, two flights of stairs to his room, where I saw him shortly afterward. He had been in good health until two years previously, when he noticed that he started to become weak and dyspneic and tired easily.

He was a small, poorly-nourished man and looked very ill. His breathing was labored and noisy, the thorax hardly moving at all; there was foam on his mouth; he was extremely restless, trying to sit up; his color was ashen and the skin was covered with perspiration. The pulse was small, wiry and regular, with 140 to 120 beats a minute. The blood pressure was 220/130.

Moist rales were heard all over the chest, but the heart sounds were hardly discernible. The feet were hanging down and looked purplish. There was no pulsation in any of the arteries

of the right foot; while on the left side the posterior tibial did not pulsate. When the feet were raised high, they turned pale.

Twenty minutes after the onset of the attack he started vomiting. The following day he showed a mild fever and leukocytosis. After a stormy course he eventually made a fair recovery.

Next to the absence of pain, the presence of latent Buerger's disease was a remarkable feature of this case of coronary thrombosis.

Emboli may be swept into the coronaries and occlude them. These emboli must originate in the left ventricle, and occur in bacterial endocarditis.

Another important causative group are infections. It is possible that, in the acute infectious fevers, like typhus, typhoid, pneumonia and dysentery, in which sudden death may occur and toxic degeneration of the heart muscle is incriminated, the real diagnosis is coronary thrombosis and ventricular fibrillation. Acute rheumatic fever may cause death by thrombosis. It has been shown that Aschoff's bodies infiltrate the walls of medium-sized coronaries and cause thrombi and infarcts.

Harcourt reported a case of *Staphylococcus aureus* bacteremia, with thrombosis of the splenic vein and the formation of a splenic tumor that was operatively removed. Thrombi formed in both femoral veins and in the coronary artery following the operation, but the patient recovered.

A number of writers have recently called attention to the relationship between coronary thrombosis and influenza. Influenza is known to affect the arterial walls, and nodular thickenings at the mouth of the coronaries have been recorded. An editorial comment, in the *Journal of the American Medical Association*, states that, in the course of years, these coronary changes may bring about the formation of thrombi. It is more likely that some patients cannot throw off the influenza infection.

Besides the acute form of influenza that we know, there may be a chronic form, having latent and active stages, which may be responsible for mesarteritis and thrombosis of the coronaries. Such a chronic influenza is probably rather common. I remember several patients that I have watched becoming ill twice or more often a year, with mild fever, general weakness, no localizing signs and a leukopenia, the attacks lasting about two weeks. They suffer from chronic influenza. One of these

patients was to undergo an elective gynecologic operation, but I advised against surgery, for fear of possible thrombi.

SYMPTOMS

Just as in thrombosis of the cerebral arteries, we have different clinical manifestations, according to the size and location of the affected arteries; so the clinical signs of coronary thrombosis may vary from no discomfort whatever to sudden death.

Herrick has recognized four groups: Those who die suddenly; those who linger a few hours or days; the patients who do not die, but remain invalids, with a lessened cardiac reserve; and those who recover and show hardly any sequelae.

Death in the first group is so characteristic as to be nearly pathognomonic. The patient is *struck down*; there is no respiratory agony; no muscular spasm; no distortion of the features. If previous attacks have been missed, their nature will be revealed in the end, no matter whether there was a postmortem or not, and even if death has taken place long ago or far away.

If the patient survives, the clinical picture of coronary thrombosis can be described under the heads of status anginosus, myocardial insufficiency and infarct.

Status anginosus: There may be prodromal symptoms—twinges of cardiac pain that may have been attributed to indigestion, corresponding to the formation of the clot.

The onset of the attack is always sudden, corresponding to the occlusion of the artery. The pain comes on without any provocation, often in the middle of the night or after a heavy meal. The location and radiation of the pain resemble those in angina. The pain is commonly substernal and varies in intensity, from a sense of mild constriction to the most intense agony. It radiates to the left shoulder, arm and hand; the right shoulder; the neck; the jaw; and the back, between the scapulae; it frequently radiates to the epigastrium and right hypochondrium. As it is associated with rigidity of the abdomen, nausea and vomiting, a "surgical abdomen" is simulated and it takes great care to avoid unnecessary operations.

The closing of an artery anywhere in the body is at times felt as a blow; the feeling being so realistic that the patients often look for their assailant. Thrombosis of the coronaries is thus felt as a blow on

the arm, and the condition has several times been diagnosed as fracture of the arm. The duration of the pain is from minutes to hours and days. *Vaso-dilators do no good.*

Prostration and shock go along with the pain. The patient's features have an ashen, greyish hue and the body is covered with perspiration. Nausea and vomiting are absent only in the mildest cases and may prove troublesome for many days. There is a fall of blood pressure. A figure of over 200 mm. does not rule out thrombosis, as it may mean a fall, if the pressure before the accident was higher. The fall of blood pressure may be so extreme as to result in total suppression of urine.

The next group of symptoms results from the failing action of the heart. *Dyspnea* of some degree is always present and often takes the place of the pain that is absent in many patients. The onset of dyspnea is sudden and the dyspnea may attain the greatest possible intensity.

Another sign of the passive congestion of the lungs that is present to a marked degree, is *cyanosis*. It is a component part of the ashen hue of the patient's complexion, and may persist for a long time, furnishing a clue to the underlying condition.

If *pulmonary edema* is present in mild degree, the fluid reaches only the air vesicles and may be discovered, if searched for, by the moist rales at the lung bases. In severer degrees of edema, the fluid reaches the finer bronchi, causes an irritating cough and is expectorated in the form of a foamy, blood-tinged serum. The dyspnea becomes greatly aggravated, the lungs are distended and rales are heard all over the chest.

Further signs of general passive congestion are a large and tender liver, albuminuria and anasarca.

The *heart findings* need not be remarkable. The heart may not be large. The apex beat cannot be felt. The heart sounds are apt to be distant and faint; and it will be noticed, if the sounds are loud, that the first sound has lost the muscular quality and has become like the second sound. An analysis of the sounds by graphic methods has confirmed this observation. This rhythm is called *embryocardia*.

The *cardiac rhythm* in thrombosis is quite often regular, though many irregularities may occur. A gallop rhythm is the sign of an embarrassed heart action. Extrasystoles are the most common irregular-

ity. Auricular fibrillation hardly ever precedes coronary infarction, but may follow it, the same as auricular flutter and paroxysmal ventricular tachycardia. Complete heart block and alternation are not uncommon. The forms of irregularity may change from day to day.

The *infarct* presents necrotic tissue that has to be absorbed and causes fever and leukocytosis. The temperature commonly rises to 100° or 101°F., but may go higher. The leukocytes average from 12,000 to 15,000. When the infarct reaches the pericardium, it sets up an irritation—a dry pericarditis. The friction rub is heard only in a small minority of cases, may be very fine, is heard over a limited area and only for a short time. If heard, it clinches the diagnosis.

Embolism: If the infarct reaches the endocardium, mural thrombi form that may mobilize in the course of the first three weeks and become emboli. Embolism of the pulmonary arteries is most common. The "pneumonias" that occur in the course of coronary thrombosis are, naturally, infarcts. It sometimes happens that embolism of a cerebral, renal or peripheral artery is the first evidence of the underlying thrombosis.

The scar that takes the place of the infarct causes the ventricular wall to thin out and, in the course of time, gives origin to an *aneurismal sac* that may rupture and cause sudden death.

Mental state: *Angor animi* is present; the patient remains conscious, unless there is extreme weakness of the heart, when he may lose consciousness. Convulsions are, as a rule, associated with complete heart block and are part of the Stokes-Adams syndrome.

The electrocardiograph is a valuable aid in the diagnosis of myocardial lesions. It helps us to recognize the various forms of irregularity—auricular and ventricular extrasystoles, auricular flutter, ventricular tachycardia and the various forms of nodal and bundle block. Besides, there are certain changes in the form of the electrocardiogram that are more or less characteristic of thrombosis, such as inversion of the T wave in the first, second or third lead; high level of the RT interval (Pardee signs); prominence of the Q wave in lead 3. A normal curve does not rule out damage to the myocardium. Students of the subject stress the importance of repeating the electrocardiographic examination and

of watching the consecutive changes. To illustrate the point: If, of two tracings, taken two months apart, there is an inversion of the T wave in lead 1 on the first tracing and none on the second, the conclusion is justified that the heart muscle has suffered an organic lesion and that the patient is on the road to recovery.

DIAGNOSIS

Pain, shock and circulatory failure are the cardinal signs of coronary occlusion. The differential diagnosis is from other heart conditions and from the "surgical abdomen."

Angina pectoris is readily differentiated. The onset in angina follows exertion; the pain lasts only minutes and yields to vasodilators; the patient's attitude is immobile, because movement brought on the attack and would aggravate it; there is no shock, no dyspnea, no moist rales over the bases, no circulatory failure. The blood pressure does not fall.

Cardiac asthma may simulate thrombosis by the sudden onset and the dyspnea; but is characterized by paroxysms of dyspnea that occur, usually at night, in people suffering from hypertension or nephritis. The paroxysms may last for minutes or hours and end in recovery or death. The attacks are brought on by excessive intake of liquids or food and also by excitement. Pituitrin or venesection relieves the attacks. Fritz Brunn believes that the genesis of these paroxysms is due to a disturbance of the water metabolism. These patients suffer from nocturia. The tissue fluids become mobilized and flow into the blood and into the kidneys. For some reason the kidneys refuse the fluid, which becomes deflected to the lungs; the lungs are flooded and attacks of cardiac asthma and pulmonary edema result. The differential points from coronary occlusion are: the rise of the blood pressure and the absence of signs of circulatory failure, in cardiac asthma.

Pain, shock, rigidity of the abdomen, nausea and vomiting may simulate disease of the gall-bladder, acute pancreatitis, ruptured gastric ulcer or appendicitis. The diagnosis is probably not particularly difficult in most of the cases, but there are some where a definite diagnosis is next to impossible.

It is easy to find, in our large institu-

tions, cases of coronary thrombosis that have been needlessly operated upon. Cholelithiasis is most commonly implicated. Paul White and others have studied the differential diagnostic points and believe that a correct diagnosis is generally possible. The gall-stone patients are younger and females predominate among them, four to one. A previous history of angina is strong evidence in favor of coronary occlusion. Attacks that go back over a long time are probably not coronary occlusion. The pain in gall-stones does not radiate into the arms, and comes, more commonly, in attacks; while it is more constant in occlusion. Signs of circulatory failure speak for occlusion, while jaundice may occur in either. The electrocardiogram may give valuable evidence.

The history is of great importance for the differential diagnosis of perforated gastric ulcer. Were the pains gastric or cardiac? A careful analysis of the statements in the history is called for. Not all postprandial pains are of gastric origin. A patient with a small heart reserve may experience epigastric pain and swelling of the liver from passive congestion, as a result of the strain that the digestion of a meal puts on his heart, and this disturbance of the action of the heart simulates dyspepsia.

It is also well to keep in mind that people are in the habit of blaming the stomach for whatever ails them; they consider, for instance, a gaseous distention of the stomach the source of their trouble, while it probably is only the effect of lesions elsewhere. Positive signs on the part of the heart, such as heart block or signs of failing circulation simplify the problem. Electrocardiograms are a great help.

PROGNOSIS

From 30 to 50 percent of the patients die during the attack or in the first few weeks thereafter. One-third are in fair health at the end of two years and about 7 percent at the end of 5 years.

Although the immediate mortality in attacks of coronary thrombosis is higher when the initial symptoms are severe than when they are mild, yet, according to L. A. Conner, almost one third of the patients who recovered from the attack had initial symptoms of very severe character. Poor heart sounds and failing circulation are a bad omen; so is heart block, pericarditis and unusual complications.

REPORT OF A CASE

M.C., female, aged 51, had an attack of substernal pain in the middle of the night; the pain radiated to the left arm and was severe enough to demand a hypodermic injection of morphine. I saw her on the third day, when the pain persisted, but was milder and there were free intervals. She was weak and dyspneic.

The patient had 6 living children and had had one miscarriage. Ten years before this attack she had a thyroidectomy; in the last two years she had gained thirty pounds in weight, lost strength and easily became short of breath. She was an obese woman, not a nervous, high-strung type, looked very pale and was dyspneic.

The temperature was 100° F.; the pulse, 110, going quickly up to 140 when she moved about; the blood pressure was 180/120; the skin was moist; over both legs there was a pitting edema and on the neck an operative scar. The cardiac apex beat was not palpable; the heart was enlarged to the left and the right, with a transverse diameter of 14 cm.; the heart sounds were distant. There were moist rales over the base of the lungs. The right hypochondrium was tender; the liver was not palpable; there was a persistently tender spot in the third right intercostal space at the sternal border. The blood count showed: hemoglobin, 60 percent (Sahli); red cells, 3,500,000; white cells, 15,000. The urine showed albumin; no sugar; granular casts; white cells and red cells. Her basal metabolism was + 15 percent.

Weakness and shortness of breath persisted. On the fifth day of her illness the left arm became painful, started swelling and assumed a purplish color. The swelling of the arm kept growing larger every day; the skin was dense and would not pit. The radial arteries were pulsating alike on both sides. The swelling diminished on the fourth day and two large veins were visible: the anterior circumflex and the lateral thoracic. On examination of the feet, both the dorsales pedis were pulsating, but no pulsation could be felt in either posterior tibial. No color changes on lowering or raising the legs could be noticed. The patient grew weaker and more dyspneic, started vomiting and died on the tenth day, from circulatory failure. No electrocardiograph was available. A post-mortem examination could not be obtained.

This case did not have severe initial symptoms, yet the progressive weakness and shortness of breath appeared as bad omens. The complicating thrombosis of the left axillary vein, proving the extensiveness of the process of clot formation, made the prognosis hopeless. The thrombosis of the coronary arteries and the left axillary vein, plus the absence of pulsation in the two tibiales posteriores, in spite of the lack of color changes, made Buerger's disease probable as the etiologic factor in this case.

TREATMENT

During the initial stage, pain and shock have to be arrested, and doses of morphine,

sufficiently large to do the work ($\frac{1}{2}$ grain—32 mgm.—to start with, up to several grains a day, if necessary) are indicated.

If there is collapse of the peripheral circulation, strophanthin is given, intravenously; epinephrin may act as a life-saver, if there is extreme fall of blood pressure. Digitalis should not be used in a routine manner, but only if there is a definite indication, in the form of passive congestion of various organs. The dose to be used should not be too massive—8 to 10 grains (0.5 to 0.65 Gm.) daily seem to be satisfactory; large doses may bring on ventricular fibrillation. The purin-base diuretics, like metaphyllin or theobromin-calcium salicylate, are useful.

Oxygen therapy has been introduced, for the alleviation of the dyspnea and cyanosis. Decided subjective improvement, with slowing of the respiratory rate and diminution of cyanosis, has been reported. It seems to have a useful place and further trials are desirable.

Attempts to get patients up before a firm scar has replaced the infarct, have proved costly. Libman advises us to be guided by the white-cell count and keep a patient in bed as long as he has leukocytosis. This is, naturally, only the ideal, which needs modification in its application.

The nutrition of the heart muscle is seriously interfered with in the course of coronary thrombosis, and vasodilators, like metaphyllin, tending to improve the circulation in the myocardium, are useful. If decompensation is present, digitalis will work to the same end and improve the muscle tone, but should be discontinued as soon as compensation is established.

The intravenous use of dextrose (20 to 40 cc. of a 25-percent solution), every other day, by supplying nutrition that is easily assimilable by the heart muscle, is of definite value.

Diabetic persons, who are liberally represented among the coronary accident patients, do not tolerate insulin well during the attack. The lowering of the blood-sugar possibly takes nutrition away from the heart muscle.

The important thing in the treatment of coronary thrombosis is an early diagnosis. Autopsies show that the initial attacks are preceded by changes in the vascular supply of the heart muscle, that may take the form of capillary fibrosis or

mild occlusion of smaller branches. Our next object is to find ways of identifying changes that are positive enough to justify

the timely enforcement of radical changes in the lives of the sufferers.

2705 West North Avenue.

Orienting the Psychic Patient

(Conceptual Images in Relationship to Time, Space and Energy)

By Gregory Stragnell, M.D., New York, N. Y.

FOR some years I have refrained from expressing myself in the field of psychopathology because I found myself in opposition to many of the ideas that were so markedly apparent in the most orthodox group of psychoanalytic workers. I thought it best to spend a few years out in the world so to speak and away from the monastic seclusion which the psychoanalytic organization so fervently offers. Most tragically, this outside world of reality has had a tendency to wean me more and more away from what I consider the hazy, unplanetary world of phantasy which analytic procedure and thought have arrived at in the last ten years. I realize fully that the group and myself may both be wrong. I insist that we are both sincere.

The foregoing short explanation I do not wish to be construed as an apology, but merely a concise statement of position. This statement is not limited to what I am about to say, but I hope will be applicable to any of my future expressions of opinion. Severe criticism has followed some of my former asseverations, on the basis that they dealt with a mundane world and were not strictly limited to the intra-psychic phenomenon which is so proudly possessed by that unfinished creature, man.

The subject that I am presenting deals with time, space and energy. It is, perhaps, unfair to talk of such matters with a hope of being understood by any but physicists and chemists. Do not feel uneasy! It will not be so formidable as it sounds. Assurance is furthermore given that I shall not indulge in a philosophic or scholastic discourse.

THE FEELING OF INADEQUACY

From my point of view there are two factors which exert a powerful bearing in the so-called formation of anxiety situations. Both of these factors can be centralized,

for purposes of discussion, under the generalized heading of what we may call a feeling of inadequacy. I contend that, without this feeling of inadequacy, there can be no formation of an anxiety situation.

The first and perhaps most important factor which enters into the formation of this feeling of inadequacy can be traced to childhood pressures or conditionings from without the individual. Foremost among these pressures would be the ones exerted by parental solicitudes, which are anxieties projected from the parent to the child through identification. These in turn give rise to conceptual feelings that any part of the environment is more potent than their own energies or capabilities are able to cope with. We have in this group those persons who have been repeatedly warned to be sure and put on their rubbers. They have been warned not to undertake tasks beyond their strength. They have been subjected to an entirely well tabulated catalog of perceptions, taboos and warnings, all of which were directed in an apparent effort to safeguard the person. The net result, however, has enhanced the person's lack of confidence and diminished his self-reliance.

In many instances, the ordinary experiences of life, through which the individual struggles at great cost, have been sufficient to act as a compensatory mechanism which has enabled him to break through the feeling of "I cannot accomplish that," to one of "I may be able to accomplish that." Even in these instances there is always an overshadowing doubt, which can be brought to the full fruition of a well-marked anxiety by some definite pressure from without, with a complete feeling of impotence from within. It may be a direct loss in the stock market or the death of someone upon whom the patient is dependent or with whom he is closely identified; or it may be a seem-

ingly trifling matter like a misplay in a card game. This latter acts, we may say, symbolically. In other words, if the person's potency is in any way questioned by himself or if the bulwarks of his defenses crumble, there is a feeling of a lessened ability to carry on the combat with what he thinks of as "life." This particular factor could stand much elaboration.

The second point deals with the subjective conceptual images which are held by so many of our subcivilized persons. When a dean or president of a college issues the diplomas to the victims of the present pedagogic system, and thinks of nothing better to say, he hands each of them a wrinkled sheepskin and tells them that they are about to step out and *face the world*. This is exactly what the schizoid feels constantly, and I am of the opinion that it is the concept expressed by the college professor and his ancestral predecessors that causes the schizoid to think as he does. Do not be apprehensive, the schizoid has no monopoly on this form of thinking. This is what I might call a happily integrated symbolic method of thought.

SYMBOLIC EXPRESSIONS

Due to the ever-increasing complexities and intricacies of our civilization, we have been obliged to group our conceptual figures into symbolic phrases. We say "I have a problem"; "I am going to a meeting of the American Psychoanalytic Association"; "I am going to lunch." When we make these statements, we hope to be understood, even when we make the statement, "I shall be working late in the office this evening."

The exigencies of economy prevent us from detailing the minutiae of these events, for we would be unable, in the course of our daily doings, to enumerate explicitly the various activities which would enter into any one of these symbolic utterances. When we make the statement "I am going to lunch," we do not say, "I shall put on my hat and coat and open the door and close the door and walk down the flight of stairs and open and close another door and walk down the street and wait for the traffic to allow me to pass and finally enter the restaurant, look for a table, dispose of my hat and coat and sit in the chair and be handed a menu by the waiter and select the items which will please my palate, cut up the food and bring this morsel or that morsel into my gullet and

go through the necessary movements of mastication and deglutition and pay the check and try to attract the attention of the pretty girl at the next table, and so on *ad infinitum*." We do not mention the various foreconscious thought activities which flit through our ever-active minds as we open and close the door and walk down the stairs. We leave all that for Marcelle Proust. We merely say, "I am going to lunch."

ESCAPE FROM PROBLEMS

Whether we consider the case of a simple anxiety or the situation in a well-marked schizoid with deterioration, we find in both instances a condition of well-marked "flight." In the schizoid, the flight is apparent by his complete retreat from reality and his withdrawal into his own spheres of phantasy. In the case of the anxiety situation, the flight is from a nebulous situation, which can only be defined by the reconstruction of his unconscious phantasy, in relationship to the adjustment which he is attempting to make to the realities in everyday life. After all, the ordinary symptom of anxiety is a manifestation of attempted flight, with a marked compromise formation, which results in a tension balance, with one component of the organism well-grounded in the same phantasy world as the schizoid, and with the other segment of the organism in rather feeble contact with the reality situation. There is a distinct relationship which we label as such and the panic which is so characteristic in the schizoid mechanism.

When we argue that the difficulties lie purely in unconscious processes which have a weakly-linked connection with fundamental reality principles, it will not be necessary to refute this point of view. But we cannot disregard another vital point, and that is the conceptual figures which are dominant in either the case of the schizoid or the anxiety sufferer, when we also argue that the complex unconscious formations are again responsible for the conceptual figures which have to deal with reality. My hypothesis is that the conceptual ideas held in either one of these instances have a direct bearing on the manifestations which we classify under the feeling of inadequacy. The feeling is that there is a problem that has to be solved and that problem looms as a huge, amor-

phous, intangible situation, which calls for a response from an organism which feels that it cannot meet this problem. It matters little what the problem may be. It may be the relationship with another person, it may be in relationship to an organization or it may be as simple as crossing the street; but it is impossible for the person who possesses this problem to segmentalize it in his mind into its various components, and the result is that before his mind there is that constant reiterative phrase, "I have a problem," "I have a problem."

TECHNIC OF TREATMENT

I have found it of practical importance to bring this into the foreground in my work clinically, and have adopted as a routine the following method: I ask the patient to write his name. The patient, little knowing the experiment which is about to be performed, agrees. While he is writing his name and after he has completed the first few letters, I harass him by asking him to stop. The patient is a little puzzled, but obeys. I then ask him, "Did you write your name? The responses vary. Usually the complaint is that he was writing his name when I stopped him. Sometimes I get a more direct answer, a simple, "No, I did not." I then ask the patient, "Were you writing your name?" The answer is always in the affirmative. I then ask him, "Can you write your name?" To this the answer is always again in the affirmative, and when I insist that he cannot write his name, he is usually puzzled.

I then begin talking to the patient about the differences entailed between the conceptive writing the name and the motor activities that are required for the completion of the task. In going over this matter, it is necessary to vary the line of approach, and sometimes it is necessary to cover a large amount of territory in order to clarify the situation. I bring up points such as: If you intended to write your name, why didn't you complete the task? What stopped you from writing your name? This example can be made to show that the patient had a goal—the writing of his name. An outside influence came between his goal and his effort. This obstacle led to frustration. "How could you overcome the frustration?" you may ask. "Was the goal given up for a greater goal?" "Was the goal set aside for a more opportune moment?" Variations of various kinds

suggest themselves. In passing, it might be well to mention that it is always best to get the patient to write his name rather than an abstract word, for the name is directly related to the ego and the example can be more clearly portrayed in this way.

I then begin another line of attack and I ask the patient to repeat the performance of writing his name. I ask him to watch the process carefully, and after he has completed the first line in the first letter of the name, I again ask him to stop for a moment and to show me where the pencil started on its course in the writing of the name, and I call to the patient's attention the fact that the pencil began at a given point and traveled to another given point. I further bring out the fact that it was a series of activities, which started, not only at a given point, but at a given time and continued until the completion of the concept, or to the point of interruption. In other words, at this stage of the experiment, I endeavor to show that two factors must be taken into consideration: first, the question of *time*; second, the question of *space*. I then ask the person to complete the name, which is done.

I then ask the hypothetical question: "What would happen if you should write your name, say, a million times?" The patient tells me that he would be tired. This brings in the question of *energy*. From this example, we can go on to others of a similar simple nature. I show that the person may have an idea about writing a letter, whereas no such thing ever happens, except as a conceptual image. The letter that is conceived of as such is broken up into component words, sentences, ideas. One does not "write a letter" *entire*, but it is conceived of as a letter and then built up from fragments.

This entire situation may be minimized, on the grounds that all that is attempted is a building up of the patient. True enough, it is a process of building up, but more important, it has a tendency to break down conceptual barriers which confront the patient. His feeling of potency is inclined to be restored, not on a false basis, but more in keeping with reality. It is the erroneous appraisal by the patient, which makes him feel he has a big, central thing that has to be handled *as such*. It tends to show him that only a fragment or a segment can or need ever be worked out at a given moment.

From this we can clearly see why so many schizoid persons feel that they must spend practically their entire lives in study and in becoming better perfected in their knowledge, so that they will not be defeated by their environment.

This concrete experiment of having the name written has another important bearing. It is a motor act. Therefore it becomes fixed as a done thing, not a theoretical lot of words that "sound good, but what of it."

Furthermore, it tends to link up, through the many sensory centers involved, plus the ego determinants of the person's own name, practically the functioning of the entire organism. You may think for the moment that this entire question is

unimportant, but I consider it a question of vital importance, for it enables the person who has this feeling of inadequacy to feel that he can handle the various segments of any situations as they arise and that he is not required to handle any problem as a whole. For a person who has a feeling of inadequacy, this new concept does much to restore his feeling of potency, to minimize the conceptual figures as they arise to frighten him, and enables him to have the feeling of greater power in meeting his various problems as they arise, when he realizes that it will only mean a segment at a time until the entire picture or letter or subject has been built up.

320 East 42nd St.

The General Practitioner as a Research Worker

By F. B. Young, M.D., Long Beach, Calif.

"We live in an era of specialization; but specialization can be overdone, and there is no inherent reason why the qualities of investigator, teacher and practitioner should not go hand in hand, be represented in a single individual, and he be none worse for the mixture."—HARVEY CUSHING.

IT IS to be granted that the objects of the medical profession are to cure disease where possible and to relieve suffering and distress where cure is impossible. All medical researches have, or at least should have, these objectives in view. Again, it must be granted that much research which does not have an apparent bearing on these ends will, in the long run, prove to be valuable. No one should criticise "pure science" because there seems to be no immediate practical application of its findings.

Specialization grew out of the great development of medical knowledge in the past fifty years, and it is thought by many that there has been an era of overspecialization and that the pendulum is now due to swing back. It is to be hoped that the general practitioner will again come into his own, and one factor to that end will be recognition, by the organized profession, of his place in the ranks of research workers.

Under recent conditions the medical profession has become a body of men with a better and broader education than ever before in history. The entrance requirements of medical colleges now demand

proof of a good preliminary education before one may enroll for the study of medicine. A superstructure of thorough understanding of the principles of modern medicine can be built only upon the satisfactory foundation of a good general education.

The actual general practice of medicine is not so hard nor so exacting as it was a few years ago. Modern methods of diagnosis and treatment, because of their exactness, have lessened much of the burden; modern methods of transportation over good roads and streets have made travel easy and quick; the modern patient is more considerate than his father was, does not expect a great deal of service at unreasonable hours and is usually willing to pay an increased fee if such service is necessary; so that, in many ways, the general practitioner is fully as independent in his ways of life as is the well-established and competent specialist. For the good of the people and of the profession, I believe that it would be better for more men to make the general practice of medicine their life work, rather than to use it, as most now do, as a stepping-stone to a specialty.

HEREDITY

The general practitioner has many opportunities for study and observation that cannot be commanded by the specialist. He is often in touch with his patients over a long period of time and can make first-hand observations as to the effects of heredity, in both its direct and collateral manifestations. The grandparents, parents, children, brothers, sisters, uncles, aunts and cousins, of his patients are often under his direct supervision or may be easily interviewed. In this manner he may become familiar with many inherent traits that would otherwise be overlooked by both the patient and the attendant.

With the investigation that has been going on for the past several years as to the effect of heredity in disease conditions, this opens a vast and fertile field. Despite the discussion that has occurred for the past half-century or more, much is still to be learned of many factors of human heredity. Many of the conclusions drawn from experiments and observations on lower organisms are found to be of questionable value in solving the problems of human heredity. This field should be invaded by the medical man who has been scientifically trained. In my own practice I have treated five generations in more than one family, and feel that in these families I know more of their inherent traits than any member could possibly know.

PSYCHIC DISEASES

The field of nervous and mental diseases opens two valuable opportunities for the well-trained general practitioner. In the first place, one should always be alert for early manifestations of such diseases. Often they develop insidiously and the physician who is alert will recognize their occurrence in the early stages. At this time careful research into the patient's physical condition, his surroundings, and other factors in the development of his disease, may throw much light on the particular case and more light on the factors underlying the development of certain of these diseases in general.

It is a well known fact, and one becoming more well recognized, that many cases of mental disturbance are due to definite physical lesions. It is only recently that the role of syphilis, tuberculosis, pellagra, focal infections, sinus diseases, prostatism and many other reliev-

physical conditions has been recognized as having etiologic effects in various types of mental conditions.

In addition to this comes the vast subject of endocrinology. Study of various endocrine manifestations is still in its infancy and the field here offered to the general practitioner is indeed vast and fertile.

The second phase of possible research value in the field of nervous and mental diseases lies in institutional work. It seems to me that much of value might be accomplished by attaching an enthusiastic, well-trained, general man to the staffs of our institutions for the care of the insane, the dependent, the delinquent and the criminals. His duties should be to work in harmony with the specialists on each staff, in the search for any and all physical conditions that might have a bearing upon the mental conditions of the patients. His work would in no sense be competitive with nor antagonistic to that of the rest of the staff, but would be complementary and additional to it. By such co-operative research it would be possible to ferret out physical conditions bearing upon mental conditions and to secure relief for some, cure for others and a better basis of understanding of certain mental diseases not yet well understood. This, also, would offer a great field for investigation in the realm of endocrinology, for the majority of cases of endocrine disorders show many "nervous symptoms" and altogether too many of them ultimately drift into institutions.

This suggestion is not in any way intended as a criticism of the present methods of managing institutions and caring for patients, but as a means for securing better results in those institutions. The clinical material in these places is so great; the physical disabilities of the patients are so evident; the interest of most of the staffs in charge is in the psychoneurotic manifestations, often to the neglect of the physical; and the need for physical rehabilitation so urgent, that this field appeals to me as one offering an almost unlimited opportunity.

EPIDEMIOLOGY

The epidemiology of many infectious diseases even yet offers a great field for observation and study by the general practitioner. The details of the transmission of poliomyelitis, diphtheria, epidemic cerebrospinal meningitis, scarlet fever, to mention only a few very common diseases, have

still many unsolved points which the observant general practitioner, with access to all the data bearing upon particular cases, may help to elucidate.

Knowledge of fungus diseases, parasites and insect-borne diseases is still in a state of flux in the United States, and the general practitioner, particularly the rural general practitioner, may avail himself of the opportunity to throw much light upon these types of infection.

HELPS AND HANDICAPS

The general practitioner of today, with his better fundamental education and his knowledge of biology, chemistry and laboratory procedure, has at his command an almost unlimited field for original research. He may claim lack of time, but I doubt if any general practitioner, in either country or city, works as hard as do the leading specialists and teachers. His worst handicap is himself, and much of this handicap comes from lack of incentive. His work and his surroundings make of him more or less a "Lone Eagle," and the very sense of loneliness and isolation lead him to neglect some wonderful opportunities. To a certain extent this isolation has been overcome; the smaller community hospitals have brought him into contact with his fellows and have afforded some opportunity for better work; laboratory and research equipment is better and cheaper, and laboratory procedure simpler and better understood; modern high-schools have made available to him young women who can be readily trained to make satisfactory laboratory technicians; good roads and rapid transportation have made it easy for him to come into contact with his fellows in attendance upon various medical society meetings; these and other factors have made the whole scope of professional life far more broad than it was even half a generation ago.

Another handicap to the general man who has a flair for original work lies in the fact that it is very difficult for him to secure recognition. This is rather less true now than it was at times in the past, for the many state medical journals and some of the other journals will give him an outlet, if his work is creditable and worthwhile. But this has not always been true; many a man has done much really hard, accurate and valuable work, only to have it rejected by an editor because he was not connected with some institution of research or teaching. An increasing number of editors and publishers are now willing to consider the subject matter, rather than the origin of a paper, in determining its qualifications.

The institution does not make the research worker; in fact, I doubt if a man can really learn to become a research worker in the true sense. He must be born with the inherent powers to see things, to reason from cause to effect, to hold to the true while rejecting the false, to stand for the truth regardless of where it leads him; and with these inborn faculties, to be willing to learn all he can from all possible sources. With these qualifications, he may well become a true original worker in any field that he may choose, and under any surroundings that may be his lot. Some of the best research work has been done by men working in isolation, while millions of dollars have been wasted in trying to make research workers out of men inherently unqualified. It is the man, and not his surroundings, that must meet the test.

The properties of accurate observation, deep study, scientific thinking, clear expression and honest reporting are not confined to any one class; these are matters that are available to all, and should be encouraged in all.

PRECLINICAL STUDIES

The effort of the medicine of the future will be to study Man with the same thoroughness that the external disease agents, such as bacteria or worry or green apples are now studied. To accomplish this the physician must so take the history and make the examination that the personality of the patient will be clearly illuminated, and his disease potentiality recognized before he meets his special menace.—GEORGE DRAPER, M.D., in "Disease and the Man."

Early Vaginal Contraceptives

By Marie Stopes, D.Sc. (Lond.), Ph.D. (München), F.L.S., etc.,
London, Eng.

President of the Society for Constructive Birth Control, London

WHILE preparing the third edition of my textbook "Contraception, Its Theory, History and Practice," I tracked down, through several indirect references, the fact that the rubber vaginal cap which is now of such technical value as a contraceptive and which has universally been attributed to Dr. Mensinga¹, was in use by Dr. Wilde over 40 years before Mensinga is supposed to have discovered and made it known. The degree of importance almost universally attributed to the "Mensinga cap" has found repeated expression, and I will only cite two illustrative instances. Dr. Aletta Jacob, Holland's pioneer woman doctor, said, in 1928²:

"But in 1880 no really reliable method of contraception was known. I began to make investigations and, in 1882, I read in a German periodical an article by Dr. Mensinga, of Flensburg, recommending the use of an occlusive pessary in just such cases as those I had in mind. I wrote to him, and a long correspondence ensued, in which he very kindly told me how to use the occlusive pessary and sent me some samples."

And Dr. L. Fraenkel, Germany's world-famous gynecologist, in 1930 said³:

"Um den Frauen-schutz hat sich die grössten Verdienste in den 80er Jahren des vorigen Jahrhunderts, Mensinga, Frauenarzt in Flensburg, erworben . . . Der sog. Neo-Malthusianismus ist fast ausschliesslich das Werk von Mensinga . . . Mensinga gab das erste Scheidenokklusivpessar an und dieses wird noch heute viel benutzt. Die Vaginalpessare, die andere Namen tragen, . . . sind nur geringfügige Modifikationen desjenigen von Mensinga."* (Italics Dr. Fraenkel's.)

And now the credit, not for making

this valuable contrivance widely known, as Mensinga certainly did, but for antedating him by over forty years in its use, must be given to his predecessor, Dr. Friedrich Adolph Wilde. All whose minds are truly scientific welcome the recognition of priority, and to find that the most important method in modern clinical contraceptive usage was described in a textbook by Wilde, in 1838, opens astonishing vistas.

Wilde⁴ discussed the condom, coitus interruptus and other contraceptive practices, but gave the preference to a rubber cap. Under his heading, "vor Ablauf der Schwangerschaft (1) Bei Sicheren Diagnose; (3) Prophylactische Behandlung:

"Der Verf. schlägt daher vor solche mit Gebäar-unvermögen behaftete Personen stets ein Pessarium aus Resina elastica tragen zu lassen, das gar keine Oeffnung hat, den Muttermund vollkommen bedeckt, dicht ausschliesst und nur während des Flusses der Katamenien abgenommen wird†."

He speaks further of fitting it with a speculum and refers to Hufeland's paper, in 1823, which I quote further on. He describes his "Cautschuk-Pessarium" as comfortable and effective. His name must now be enrolled in the honoured list of pioneers of contraception.

CONTRACEPTION IN ANCIENT TIMES

Wilde himself refers to a paper by Dr. Hufeland, in 1823, from whom he gives a quotation of much interest in connection with the use of a barrier in the vagina. It is not, however, quite explicit whether or not the barrier referred to by Hufeland was a rubber vaginal cap. As I read the text it seemed possible it might have been a sponge or some other such ancient barrier, such as that described in ancient Egypt, which are, themselves, the earliest records of true contraceptives in the world.

4.—Dr. Friedrich Adolph Wilde (1838) "Das weibliche Gebäar-Unvermögen: Eine medicinisch-juridische Abhandlung Zum Gebrauch für praktische Geburtshelfer, Aerzte, und Juristen." Pp. xvi. 413, Berlin, 1838.

†"Before completion of the pregnancy period

(1) By positive diagnosis;

(3) Prophylactic treatment:—

The author suggests therefore to let persons, to whom child bearing is impossible, wear a rubber pessary constantly; the pessary having no opening, covering the os uteri completely and closing it tightly, to be removed only during the menstrual period."

1.—Mensinga, Dr. Med. (1882): "Das Pessarium occlusivum und dessen Applikation." Part 2, Supplement to "Fakultative Sterilität", 7th Ed. pp. 80, 2 pls. Leipzig, 1906.

Mensinga, Dr. Med. (1888): "Facultative Sterilität." Part II, supplement. pp. 80, 2 pls. Leipzig, Seventh edition, 1900.

2.—Dr. Aletta Jacobs (1928) article in "Some more Medical Views on Birth Control", edited by Norman Haire, pp. 239. London, 1928.

3.—Dr. L. Fraenkel (1930) "Sterilisierung und Konzeptions-verhütung". Archiv. f. Gynäkologie, Pp. 86-132, Berlin, 1930.

*"In the matter of protection for women, the greatest credit during the 80th year of the last century goes to Mensinga, Gynecologist, of Flensburg . . . The so-called neo-malthusianism is almost exclusively the work of Mensinga . . . Mensinga developed the first sheath-occlusion pessary, and this is yet frequently used today. The vaginal pessary, which is called by a different name, is only a slight modification of Mensinga's."

These are described in an ancient Egyptian papyrus of the Twelfth-Dynasty (circa 1850 B.C.), and of them Warren R. Dawson⁵ says (p. 193):

"The first consists of crocodile's dung mixed with a paste-like vehicle, and is probably a pessary for insertion in the vagina; the second consists of irrigating the vagina with honey and natron, and the third mentions a gum-like substance for insertion in the vagina."

Though the choice of substance may perhaps be attributed to "magic," still, as Mr. Dawson points out "it is curious to note how, in essence, these ancient contraceptives resemble certain types that are still in use at the present day. Honey has several of the qualities of oil, in relation to its clogging capacity"; and also, "the use of a dung mass, inserted as a pessary in the vagina, is not essentially unlike a sponge soaked in some weak acid, which is among the most effective contraceptives still used."

Tradition appears to have carried on belief in the effectiveness of these methods, and Dr. Dawson gives (p. 195) an extract from the Arabic writer of the ninth century who said, "*Stercum elephatinum cum melle mixtum et in vulva mulieris positum nunquam permittit concipere*".[†] This has been attributed to the Indians, but as Dawson points out, "it is evidently of Egyptian origin, and contains the mere substitution of an Indian animal, the elephant, for the characteristically Egyptian crocodile."

Thus we see that the still-used "sponge and chemical" formula was, in essentials, in use nearly four thousand years ago in ancient Egypt.

Dr. C. W. Hufeland's paper, published in a German medical journal in 1823⁷, is also of interest; it discusses the harmfulness of *coitus interruptus*, both to the nervous system and as a cause of impotence, but our interest in it now centers in its description of a barrier in the vagina. His words are:

"Die meisten Bauerfamilien hatten nur 2 bis

5.—Warren R. Dawson, F.S.A., F.R.A.I. (1928) "Early Ideas Concerning Conception and Contraception," in "Medical Help on Birth Control," Pp. xii, 225, see pp. 189-200. London, 1928.

6.—Warren R. Dawson (1927) Early Ideas Relating to Conception, Contraception, and Sex determination. *Caledonian Med. Journal*, Vol. 13, No. 8, see pp. 296-302. Glasgow, 1927.

7.—Dr. C. W. Hufeland (1823) Von dem Rechte des Arztes über Leben und Tod. *Journ. praktischen Heilkunde*, Vol. 66, Stück I, pp. 128. Berlin, 1823.

†Elephant's dung mixed with honey and placed in a woman's vulva will prevent conception."

3 Kinder, und dann nicht mehr. Bei genauer Untersuchung fand sie, dass eine Hebamme dieses Geheimnis besass. Sie brachte den Weibern unbewusst, zu ende des Wochenbettes, einen fremden Körper vor dem Muttermund, welcher den Eingang verschloss."[§]

The year 1823 is particularly critical and interesting in the history of the birth control movement. It was the date of the printing and circularizing of the famous "Diabolical Handbills" by Francis Place⁸. Some recent workers have fancied a direct connection between Francis Place and the founding of the modern clinics. This appears to me fanciful. That Mensinga, whose popularization of the vaginal rubber cap renders him in the direct lineage of those who have contributed to the success of the modern movement for clinic work in birth control, should have predecessors both in Wilde, in 1838, and Hufeland, in 1823, brings us back, by a curious coincidence, to the year of 1823 as a date of outstanding interest in the history of the birth control movement.

Wilde's book, in other respects, is a very remarkable one; its elaborate detail, careful analysis, sub-divided sections and headings are meticulous and all is written in an amazingly modern spirit. From the point of view of the woman herself, and not in any "Victorian" attitude, he discusses her right to and the medical practitioner's duty to perform Caesarean section, artificial abortion, to prevent future hopeless pregnancies by the extirpation of the uterus, ligature of tubes and much else of modern interest. All is accompanied by numerous and full bibliographic references, not surpassed in quality by any modern textbook of medicine I have encountered. Wilde's is, indeed, a work amazing to find at its date. I may mention that it is not in the British Museum and I am greatly indebted to the State Library of Berlin for sending it over for me to study in the Library of University College. Photographs of some of the pages are now placed in the library of the Clinic for Birth Control, 108 Whitfield Street, London, where they may be consulted.

Heatherbank, Hindhead, Surrey.

8.—M. C. Stopes, "Contraception its Theory, History and Practice" (1923, 1st Ed.); 2nd Ed. Pp. xxvi, 480, V pls. London, 1927-29.

§Most peasant families had only 2 to 3 children, then no more. Careful investigation showed that a midwife possessed this secret. At the end of the child bed (puerperium) she brought the women, unknowingly on their part, a foreign substance which, applied to the os uteri, closed the entrance."

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HOW DO YOU FIGHT A GIANT?

UNDoubtedly the true reason for a physician's existence is the belief of the public that in him they will find a wide and deep knowledge of remedies and a discriminating resourcefulness and skill in their application, when they bring to him their disabilities.

It is essential, then, that every physician shall be a savant in therapeutics and an expert in therapy, if he intends to keep faith with his confiding and trustful clients. The largest number of volumes upon his shelves should contain information about therapeutics; and therapeutics, we may suggest, is the transfer of energy to a living being, for the purpose of preventing, ameliorating, curing or modifying abnormal structure and function. Energy appears in a number of forms other than drugs. Why ignore any of them, especially when others more popular sometimes fail us? As Solis-Cohen and Githens, in their work on pharmacotherapeutics, so wisely remark, why fight a giant with one hand tied behind you?

A true physician should have, not only an open mind, unbiased by prejudice, but he should also have a genius for inquiry—

a divine curiosity to examine and study any form of remedy of which he may hear favorable reports. To ignore, and therefore fail to use, any remedy which might remove the fangs of pain or daunt the approach of death, because of ignorance or lack of a desire to be enlightened, is to be untrue to his high calling and false to the trust which his patients place in him in their hour of need.

The field of physical therapeutics has been but indifferently reaped by the medical profession and, as a result, many valuable remedial measures, some of them ridiculously simple, have been entirely unused or not used to their full powers. Let every one who reads these lines, in all seriousness, write down, *now*, all that he knows as to the physiologic effects of heat and cold; the ways in which heat and cold may be applied; the indications and contraindications to their use as remedies; and the technics of their application.

Having made this test, let each ask himself the question, "Am I fighting giants with one hand tied behind me?"—and answer that question honestly.

F. T. W.

QUESTIONS AND ANSWERS

THERE seem to be a good many physicians who would like to use physical therapy in their practices, or who are using it to some extent, who feel handicapped in this undertaking by a lack of knowledge of the underlying principles and practical technics of the various agencies used.

In order to help such people, we shall be glad to inaugurate a regular department for questions and answers, in this section of CLINICAL MEDICINE AND SURGERY, and we hope that our readers will submit their problems so freely that this department will prove to be a *real feature*. The questions will be answered by men who are fully qualified in this field of work.

We should also be glad to receive a large number of brief clinical reports (200 to 500 words), telling of successes or failures with the application of physical measures in the treatment of disease. Tell us

and your confreres about what you are accomplishing (and, if possible, *why*), so that we may profit by your experience.

Incidentally, there is no law compelling you to limit your questions or your comments to physical therapy. Our section, "*Clinical Notes and Practical Suggestions*," is just the place for you to come with your *general* questions, case reports and little personal ideas (as signed editorials), so that all, including the writers, may profit by the discussions which are sure to arise. We shall, of course, be glad to have these communications polished up and dressed up as nicely as possible, but if you have the *ideas* (even if you lack the time and skill for literary composition), *send them on anyway* and we will dress them properly to appear in public.

We hope to be deluged by responses to this offer of a free (within ethical bounds) forum.

G. B. L.

Medical Electrolysis in Office Practice

By L. E. Barnes, M.D., Chicago, Ill.

IN MY office practice I have found that working knowledge of electrical currents has been of great value to me and I believe they should become more widely employed, as the results which I am about to report can be duplicated by anyone who understands the polarity effects of direct-current electricity, also known as galvanism.

A knowledge of the chemical and physiologic effects of electrolytic currents is based upon the different effects of the anode (positive electrode) and the cathode (negative electrode) and the further important fact that the treatment electrode is used to concentrate the effects of that polarity upon the part to be treated, while the indifferent or dispersing electrode, which must be many times larger in surface area, diffuses and thus weakens the current passing through the tissues beneath it, thus exerting a negligible effect.

When the active electrode is connected with the *negative* pole of the battery or

other source of the direct, continuous current, hydrogen is released, the tissues are hydrated and alkalized, which produces softening, swelling and active hyperemia by vasodilation. It is also irritating to the sensory nerves.

When the active electrode is connected with the *positive* pole, oxygen is released, the tissues are acidified and dehydrated and a temporary vasoconstriction occurs, with shrinking and hardening. It is also sedative to the sensory nerves.

When solutions of electrolytes are employed, especially the metallic salts, the metallic ions may be driven into the tissues, if applied on the *positive* (pole) electrode, where they exert a superficial remedial effect. The electro-negative ions, such as SO_4 , Cl , and I , are driven into the tissues when applied from the *negative* (pole) electrode. When applying the metallic ions, in addition to using a solution of the metallic salt, the same metal is used for the electrode (positive pole), as me-

tallic ions are also given off, though not so freely as from a solution of its salts.

Because positively charged ions travel from the positive pole (anode) toward the negative pole, and because negatively charged ions travel from the negative pole toward the positive, the polarity of the electrode by which the solution is applied is of paramount importance in the electric medication, called iontophoresis.

CLINICAL APPLICATIONS

Eye Conditions

The eyes are readily influenced by electrolysis. Glaucoma is relieved by the dilating effects of the negative pole. The positive pole relieves cases of strained and aching eyes, while the negative is used for muscle paralysis. Moist-pad electrodes are used over the eyes, while the indifferent electrode may be placed on the forehead or nape of the neck or held in the hands. A current to tolerance, usually not over 5 milliamperes, may be used for periods of 10 minutes. In cases of ptosis, I have found that the ten-minute use of the mechanical effects of the slow sinusoidal current, repeated every other day, worked wonders in many of the old patients.

Ear Conditions

For catarrhal deafness with its adhesions, I employ iodine ions. A wire electrode is well wrapped with cotton and inserted into the meatus of the affected ear. With the patient lying on the opposite ear, a 4-percent solution of potassium iodide is poured in, to saturate the cotton and make good contact with the drum. A pad wet similarly may be applied to the pinna and held in place by a sandbag. An indifferent electrode may be placed under the ear on which the patient lies.

The active or treatment electrode in the affected ear is connected with the *negative* pole of the battery, the indifferent electrode with the positive pole. In this way the iodine ions are driven into the tissues, while the potassium ions remain on the electrode. I give a treatment once every three days for fifteen minutes. The current volume is gauged according to the tolerance of the patient, which is from 2 to 5 milliamperes. The smaller the electrode surface in contact, the more concentrated will the current be in a smaller area of tissue, hence, as registered by the meter, fewer milliamperes of current can be tolerated. Should the current be reversed, the

treatment electrode would be the positive pole and potassium ions would be driven in, while the iodine ions remained on the electrode.

For additional mechanical effects upon the drum and ossicular joints, I connect the electrodes with a sinusoidal source, giving a slow sinusoidal current (which is not chemical) for five minutes. Persistent treatment of this type often brings surprisingly pleasant results.

Nasal Conditions

I have greatly improved hundreds of cases of chronic discharging sinuses in the following manner: Using zinc strips, four inches long by one-eighth of an inch wide, well wrapped in cotton, as treatment electrodes, I insert one in each naris as far as it will go. I use, as a preliminary anesthetic, a 1-percent cocaine or 1- or 2-percent Butyn solution, applied as a spray. The electrodes, before insertion, are thoroughly moistened with a solution of: zinc sulphate, 40 grains (2.65 Gm.); glycerin, 1 ounce (30 cc.); water, to make one quart (1,000 cc.), and attached to the *positive* pole of the battery by a wire clip like a battery clip.

The patient lies on his back, with a pillow under the shoulders to lower the head and thus allow the solution to gravitate into the ethmoids and sinuses. An indifferent electrode connected with the negative pole, is placed on the forehead and held by a sand bag. A dry towel is wrapped around the wire leading to the nose, so that the patient may hold the electrodes in place during treatment. The current is turned on to tolerance and maintained for fifteen minutes. Daily treatments are given. If the electrodes in the nose are made of negative polarity, congestion and swelling, with interference in nasal breathing, will result; and besides, the zinc ions will not penetrate the tissues.

Cervical Adenitis

To soften and cause absorption of cervical adenitis I employ iodine ions. After cleansing the skin of all oily substances, which obstruct the passage of the current, place pad electrodes, wet with a 2-percent solution of sodium or potassium iodide, on the skin over the swollen glands, connect them with the *negative* pole of the battery and fix them in place with a bandage. The large indifferent electrode, wet with saline solution, may be placed elsewhere—on the

chest or back, for example—and connected with the positive pole. A current to tolerance is applied for ten minutes daily.

In using pad electrodes, see that the skin is free from oils or fats, which obstruct the passage of the current, and that all abrasions, cuts, scratches, pimples or other breaks in the skin are covered with collodion or rubber adhesive plaster, otherwise the current will concentrate through these breaks, which are excellent conductors, and so cause great pain and a caustic burn. If the patient complains, turn off the current and investigate the cause.

Uterine Cervicitis

In about two weeks after the bowel contents contaminate the vagina and cervix, the toxins of the *Bacillus coli* are absorbed into the blood and produce a chain of local and systemic symptoms. A culture of the cervical discharge will show the *Bacillus coli*, which is often decidedly virulent in this locality.

Disinfection of the cervical canal is accomplished by copper ions or zinc ions, using a 1-percent solution of their salts on an electrode well covered with cotton. The vaginal portion (stem) of the electrode should be well insulated with hard rubber, bakelite or other insulating substance. As we employ the positive polarity for this treatment, the insertion of a bare metallic electrode will result in a very aggravating adhesion between the electrode and the cervical mucosa, due to the coagulating effects of this polarity and, if force is used to remove it, some of the mucosa will come away, with bleeding. This is a method of removing tenacious mucous plugs from the cervix.

A large, negative pad electrode is placed beneath the buttocks or on the abdomen. I employ a current of 30 milliamperes for 20 minutes, once a week or once in two weeks, according to the reaction.

Stenosis of the cervix may be relieved by using a bare metallic bougie electrode (with insulated stem) in the cervix and connecting it with the negative pole of the battery. The indifferent pad electrode is made positive. No fear of the electrode sticking need be felt, as negative electrolysis softens and liquifies. The electrode may be advanced, as a dilator, as the cervix softens.

In using the current through mucous membrane, especially when inflamed, sensation is no guide to volume of current

and the meter must be the guide.

Hemorrhoids

Surgical electrolysis, using the negative pole and a needle electrode, will remove hemorrhoids painlessly. They are readily coagulated and disorganized, the contents being absorbed like blood-blisters, or, if ruptured, coming away like coffee grounds. I use the needle electrode designed for epilation, only with a shoulder near the end, taking care to penetrate the hemorrhoid only and not the surrounding mucosa, which is highly sensitive. The indifferent electrode may be placed under the patient's buttock, as the Sims' position is preferred.

Fistula in Ano

The external fistulas may be treated with copper ions, which are injected with a solution of equal parts of 4-percent copper sulphate solution and 2-percent Butyn solution, thus making a 2-percent copper sulphate solution.

A piece of bare copper wire is inserted for the electrode, as far as it can be advanced without undue force, and anchored fast with adhesive plaster. This is connected with the positive pole of the battery. The moist negative pad electrode may be placed under the buttocks, or on the abdomen. From 2 to 5 milliamperes of current are administered for fifteen minutes daily. At first the discharge will increase, but after several treatments the fistula will heal.

Prostatitis

For prostatitis, I use Neiswanger's prostatic electrode, which consists of a rubber catheter, size 32 F., with a metal collar, having a copper wire inside extending to the tip, but not protruding. For a distance of about two inches from the tip there are numerous small holes. This portion is enclosed by a pouch composed of a fishskin (not rubber) condom, firmly fastened in place by rubber bands to prevent leakage.

The anus and the electrode are lubricated with tragacanth jelly or Lubritine or K-Y jelly. Do not use mineral or vegetable oils, which obstruct the flow of the current.

The electrode is gently inserted until the pouch is in contact with the prostate. The catheter is then connected with a douche bag or can, containing a saline or copper sulphate solution, 1 percent, heated to 120 degrees Fahrenheit. The douche can

should be about six feet above the buttocks, as the patient lies in the Sims position. Enough solution is then run in to partly fill the pouch. If distended it will not accurately contact the irregular surface of the prostate. The wire is then connected with the positive pole of the battery and a negative pad electrode is placed in position under the buttocks. The current is then cautiously turned on until 30 milliamperes are recorded on the meter, and this is continued for ten minutes only. Then turn off the current slowly, to avoid shock.

This treatment certainly comforts the old prostatic patients, if given every two to seven days. Do not give more than the dose above recommended. Overtreatment may produce the opposite results to what one expects, on account of irritation.

ELECTROLYSIS AND DIATHERMY COMPARED

Diathermy is the generally accepted name for heating living tissues by passing through them an electric current which reverses its polarity more than ten thousand times per second. Some good machines give reversals of millions per second. The result, therefore, is thermal and not chemical, since the polarity does not remain constant.

With appropriate technic, the current may be warming (diathermy), when spread over wide areas of surface by plate electrodes, or it may coagulate (that is boil) the tissues, if concentrated by needle-point electrodes.

The very high-tension, high-frequency oscillating current, obtained from the Oudin resonator or the Tesla coil, has so small a volume that the current gives a cold spark, which desiccates or chars when given from a needle-point electrode, or stimulatingly warms, if given from a glass condenser electrode.

High-frequency currents are thermal, while electrolytic currents are chemical, with distinctive chemical effects according to the polarity of the electrode used for treatment. If the electrolytic current be rhythmically interrupted, mechanical effects are added.

I mention these facts as I have been asked so often as to the polarity of high-frequency currents. One cannot obtain both effects from the same electric apparatus.

6857 So. Halsted St.

Bell's Palsy

(Its Early Treatment by Electric Currents)

By William Martin, M.D., Atlantic City, N. J.

Member American Medical Editors' & Authors' Assoc.

FOR a number of years I have contended for the earliest possible treatment of Bell's palsy by the use of electric currents; but the old neurologic teaching seems to cling most tenaciously in the minds of many physicians—this waiting and delay proposition, as applied to all paralytic conditions, irrespective of type. It is difficult to throw off the yoke of early teaching.

One factor, perhaps, is that a differential diagnosis is not always made in each case seen. All are facial paralyses and, as such, come under the ban of electric treatments until a sufficient time elapses to allow all inflammation to disappear, after which these currents may be tried, to see whether or not they will help. Perhaps it is well

to have forbearance under these conditions and not express one's feelings when one feels strongly. Suffice it to say that, in all cases of true Bell's palsy, the earlier the treatment is begun, the better; and the soundness of this statement can be proven to anyone's satisfaction, granting that one is willing to look into the matter without prejudice.

We have three forms of facial paralysis, two of which have organic lesions, and what has been stated does not apply to these. It is the third, or peripheral, type that is under consideration here.

The other two, supranuclear and nuclear, have several points of difference as regards symptoms, and a superficial review will be given as a help toward differentia-

tion. The matter can be studied in more detail from textbooks.

DIFFERENTIAL DIAGNOSIS

The supranuclear type has its pathologic lesion somewhere in the course of the pyramidal fibres, passing from the lower end of the precentral gyrus in one hemisphere to the facial nucleus on the opposite side of the pons Varolii. This affects the side of the face opposite the lesion.

The nuclear type has the lesion in the facial nucleus itself. In the peripheral type, Bell's palsy, the seventh pair of cranial nerves is involved, somewhere between its origin in the nucleus and the point where it divides to supply the various muscles. This description of the lesion sites will be sufficient to demonstrate the types and will be a guide in treatment.

The paralysis of the supranuclear form may be, and often is, in conjunction with that of a hemiplegia or other paralysis. In this, the difference between the two sides of the face is not so marked in the upper as in the lower half of the face. The patient is able to elevate both eyebrows and close both eyes; but in an attempt to expose the teeth, the lip will remain immobile or will retract slowly and feebly on the affected side, the contrast in depth of the naso-labial folds being very clearly emphasized.

The nuclear type may be slight or severe, therefore there may be a partial or complete paralysis. All of the muscles supplied by the nerve will be affected more or less equally, and impairment of movements obtains, whether they are voluntary, emotional or reflex in origin.

The inability to close the eye, with drooping lower lid, will offer poor protection to the eyeball and allow of an overflow of tears upon the cheek, with conjunctivitis and blepharitis in many instances. Saliva escapes from the corner of the mouth and there will be some difficulty with articulation of the labial consonants.

Bell's palsy resembles the latter type in many particulars, all the muscles supplied being affected to a more or less equal degree, and there is some early atrophy and alterations in the electric excitability of the involved muscles. It is often very difficult to differentiate these two forms, but with the nuclear there may be an external rectus palsy, together with other symptoms incident to a more destructive pathologic lesion.

The term, Bell's palsy, is usually applied to an inflammatory process, operating at some point within or just below the Fallopian canal. With this we have the usual history of the patient sitting in a draft, such as would occur in a car with the window open. The patient's attention is first attracted to a staring eye and drooping mouth, when he looks at himself in a mirror, there being no sensation as a rule. When he attempts to spit or whistle, he finds it impossible and becomes alarmed. His first thought is to seek the help of a physician, and it may be considered fortunate if he happens to fall in the hands of one acquainted with the value of the earliest possible electric treatments.

The usual teaching has been that of delay—wait for two or three weeks or more until the inflammation has disappeared, and then try electricity, as it "may do some good." Meanwhile, there is the exudate pressure, cutting off neurone activity, and with it atrophy and a more or less fixed paralysis, as the result of this condition continuing. Because of this "do nothing" regime, many physicians discount the value of electricity in the treatment of this disease. The electrotherapist is given no chance and the cause suffers accordingly.

PATHOLOGY AND ETIOLOGY

Let us look a little into the pathology incident to this condition. With any inflammation we have an increased flow of blood to the affected part, with an inability of the capillaries to carry off the excess, therefore there exists a stasis, with an increase of blood cells, lymph and fibrin in the lymph spaces of the tissues involved. When not removed by treatment, this engorgement persists until fibrosis and hyperplasia become the end-results, and the condition is a fixed one. The early exudate is soft and readily removed, therefore, the more quickly it is removed, the better.

This exudate fixes itself within the sheath and, if the inflammation is more extensive, the contiguous tissues become involved also and we find the whole mass of tissues bound down firmly. This splinting is nature's method of securing rest to the parts—a way of reducing the inflammation. Unfortunately, this exudate does not disappear with the reduction of the inflammation, but becomes gradually more and more fixed as time goes on, until the stage of hyperplasia is reached. This, in brief, will illustrate the danger of delay

and the advisability of speedy treatment.

The etiologic factor seems to be recognized as some form of focal infection, in the average case. Systemic infections must also be considered as possibilities. In my experience, tooth infection has played the major role, and all cases that come to me go through a careful examination of their teeth. This examination includes x-ray studies, tests for vitality, transillumination and the usual dental examination by a competent dentist. There are no unnecessary extractions, but no dead teeth are allowed to remain as potential sources of further danger.

TREATMENT

Treatment of the early cases is simple. Taking the patient who applies within thirty-six hours of the inception of the paralysis, I may apply heat in some form, for an intensive hyperemia, but my main dependence is upon the static wave current. The heat is either from some form of lamp—infrared or therapeutic lamp of high wattage—or diathermy to the face. One metal electrode is applied directly over the distribution of the facial nerve, front and back of the ear of the affected side, and the opposing electrode in practically the same position on the other side. Moderate milliamperage is used for twenty-minutes, sometimes only 500 ma. being sufficient. If the lamp is used, I heat the parts to tolerance for fifteen or twenty minutes.

The static wave current is the main agency, because of its mechanical action. As the current jumps across the gap, there is a contraction and relaxation of the tissues, synchronously with the current jump.

This acts directly upon the soft exudate and expresses it from the tissues through the normal lymph channels, thus relieving the nerve pressure. It is surprising how soon the patient notices a different sense of feeling in his face, and a couple of treatments will bring about an almost normal feeling. At most, four treatments will restore the face to normal. Three have generally done so, but I am allowing one more treatment for good measure.

After thirty-six hours we will find a difference. Each twenty-four hours delay before seeking advice will add several treatments to the original four, to obtain results. After a week's delay, it may take three or four weeks to secure the result. This is not surmise, but the result of a considerable experience in the treatment of these rather common cases.

After two or three weeks we must make a radical change in the treatment, the static wave current having lost much of its efficacy. Here we resort to the galvanic current in its various methods of application, but since this paper is not dealing with this type of case, further mention will be omitted.

If any one will take time for a careful consideration of what has here been written, and with an unbiased mind, I feel sure that there will be no difficulty in recognizing the fairness of this contention for early treatment in these cases. It has proven its worth in so many instances that I feel it incumbent upon myself to spread this information as widely as possible. Many patients may be saved from a permanent deformity, and surely this fact alone should make its appeal.

117 S. Illinois Ave.

CURE THROUGH ACTIVITY

The goal of life is creativeness. The tremendous urge to express oneself fully, when it is unrealized, can not do anything but cause one to become sick.

A special example of this appeared in the case of a patient suffering from neuritis, which turned out to be an unwritten novel imprisoned within him. Such esthetic sufferers should seek a cure for their spiritual maladies in the creative work of poetry or painting.

The main thing to observe is that expression comes from within, and can assume due form, either in the creation of beauty through art and literature, or in the appreciation of such esthetic excellence in others.—

—DR. ANNA MILLS, quoted in Lit. Digest, March 14, 1931.

CLINICAL MISCELLANY

Fractures

IN FRACTURES of bones, it is always essential to obtain good apposition and bony union. After this is accomplished, we must then obtain a good functional result. It may, therefore, be not alone in the osseous result, but also in the functional impairments, that physical therapy comes into play.

Physical therapy should not be instituted long after damage has been done; it should not be relied upon solely to rehabilitate cases functionally impaired, after several unsuccessful attempts to secure bony union have failed; it should be instituted from the very onset of the condition. It is the duty of the surgeon to obtain the best possible approximation of the fragment ends; but the restoration and coordination of the various neuro-muscular bundles should belong to the physical therapist. It is indeed a sad sight to see an extremity markedly atrophied and fibrosed, with no muscular function, after a perfect bony union has resulted.

Where it becomes necessary to immobilize an extremity or part of the body in a cast, windows should be cut in the cast and physical measures applied, in order to prevent atrophy of the nerves and muscles from the very start. At other locations, it is advisable to split the cast so that it can be removed, and stimulate the muscles daily. Even in a Pott's fracture, it is well to remove the plaster very early and submerge the foot in a whirlpool bath, in order to stimulate the muscles around the joint.

Often one observes that a slight fracture about either shoulder joint becomes a difficult problem, in so far as functional restoration is concerned. This is, in all probability, due to the great amount of periarticular infiltration and inflammatory limitation of motion, as well as to pain. Added to this are the adduction and immobilization caused by the Jones' position, that virtually plaster and shrink the nerve and muscle bundles together. More external rotation and abduction, maintained in place by a brace, with windows over the deltoid muscle for treatment, would, in the end, spare the patient much suffering.

Early cooperation between the surgeon

and physical therapist would certainly lead to better post-fracture functional results in the earliest possible time, and thus eliminate the worrying after-treatment from the orthopedic department.

LOUIS J. GELBER, M.D.

Paterson, N. J.

The Therapeutic Aspects of a Seaside Climate

THERE are few cases of debility, convalescence or chronic illness which will not be benefited by seaside residence at the right time of year. The time and place must be chosen with due regard to the nature of the condition, and great care must be exercised to ensure that adaptation to the new conditions is gradually brought about.—DR. P. LEWIS, in *Brit. J. Physical Med.*, July, 1931.

Radiation Treatment of Lupus

THE various types of lupus must be carefully differentiated, if success is to follow radiation treatment; the type which is suitable for x-ray treatment is far from suitable for ultraviolet irradiation.

The dry type of lupus, where there are the characteristic nodules and ulcerated patches, is eminently suitable for this latter treatment; whereas the purely ulcerative types will respond better to x-rays.—DR. F. H. HUMPHRIS, in *Brit. J. Physical Med.*, July, 1931.

X-Ray Protection

UPON the suggestion of the International Safety Committee, an advisory Committee on X-Ray and Radium Protection was formed in the United States. On this committee were representatives of the radiologic societies, of the manufacturers of equipment and of the American Medical Association. The recommendations of this committee are published in full in *Radiology*, Sept., 1931. They are arranged under seventeen distinct headings and include regulations relating to equipment, for electrical protection, for the storage of films in hospitals, offices, etc., and for the protection of the personnel.

RECENT ABSTRACTS

Roentgenotherapy in Non-Malignant Conditions

In Illinois M. J., Aug., 1931, Dr. I. S. Trostler, of Chicago, mentions a large number of pathologic conditions, other than malignant, in which roentgenotherapy can be employed effectively. Diseases throughout the whole system are included.

Dr. Trostler says that there are three things about roentgen-ray treatment that can be proved and on which the contention of its efficacy in the multifarious diseases mentioned rests. These three points are:

1.—The roentgen-rays produce sedation; they depress pain and reduce cellular activity and function.

2.—The roentgen-rays produce an endarteritis, particularly in the smaller blood vessels. They cause reduction in the circulation in the areas irradiated.

3.—The roentgen-rays soften horny cells.

If these three claims be granted, all that is necessary is to apply them to the tissues involved and all the curative effects claimed by the author in the various lesions named in his paper will be explained.

To apply roentgenotherapy properly, in a safe and satisfactory manner, the user should be a graduate in medicine. This absolutely essential requirement should be combined with the knowledge and skill acquired by long experience in the manipulation and administration of the remedy. Morphine, atropine and less potent drugs must be prescribed only by a physician, for fear of over-dosing. But while, for morphine and atropine, there are sure-acting antidotes, there is no antidote for an overdose of the roentgen-rays.

Treatment of Cervicitis by Cautery and Electrocoagulation

Cauterization with the actual thermocautery heats from the surface inward and must, of necessity, destroy the surface first, before any appreciable heat penetration can take place. On the other hand, by electrocoagulation, maximum heating may and does take place in the deeper structures before the superficial structures become coagulated.

In *Am. J. Obstet. & Gynec.*, July, 1931, Dr. M. A. Roblee, of St. Louis, from his experience, states that, in case of a recent postpartum laceration or a laceration in a chronic cervicitis, it is advisable to destroy the cervical tissue to the point of retraction caused by subsequent scar tissue; in such cases the use of the actual thermocautery is advised.

Actual cauterization is preferred to electrocoagulation in the recent postpartum erosion and recent postpartum endocervicitis, as in these cases infection is usually superficial and the deeper cervical portions and racemose glands are not so extensively involved as in cases of chronic cervicitis.

In the chronic cervicitis group, electrocoagulation, with or without fulguration, will certainly more adequately destroy the deeper cervical tissue.

Contraindications for cauterization or electrocoagulation of the cervix are: suspicion or presence of pregnancy or cancer; also actual cervical infection or during the immediate premenstrual or postmenstrual periods.

The Elliott Method of Applying Heat to the Vagina

The method devised by Dr. C. R. Elliott, of applying heat to the vagina is by a distensible vaginal bag, through which water is introduced and maintained at any desired temperature and pressure. According to Drs. F. C. Holden and W. S. Gurnee, of New York, writing in *Am. J. Obst. & Gynecol.*, July, 1931, by this means a consistently uniform temperature of 130°F. can be maintained for any length of time against a large area of distended vagina, cervix and pelvic organs, causing a marked increase in the pelvic circulation.

It is an excellent treatment for gonorrhea, because a temperature lethal to the gonococcus can be maintained.

In cases of salpingitis, pelvic cellulitis or pelvic abscess, the marked increase in pelvic circulation causes a more rapid resolution than with any method previously tried.

Treatment of Pernicious Anemia by Ultraviolet Rays

For some years past, Dr. D. I. Macht, of the Johns Hopkins University, has been engaged in the study of the effects of toxins and drugs on animal and vegetable protoplasm. In *Brit. J. Actinother. & Physiother.*, Feb., 1931, he gives a summary of recent work in the investigation of pernicious anemia. It is shown that, by a new approach in the study of pernicious anemia blood; namely, by means of phytopharmacologic methods, there has been established for the first time an experimental proof of the presence of a toxic substance in the blood of pernicious anemia patients. Such a toxicologic reaction is not exhibited by specimens of blood serum from secondary anemias, leukemias, Hodgkin's disease, carcinoma and other pathologic states producing an anemic condition of the blood. The phytopharmacologic experiments have thus, not only contributed to our knowledge of the etiology of pernicious anemia, but have yielded a practical method of differential diagnosis. Furthermore, since the toxicity of pernicious anemia blood serum can be expressed quantitatively in terms of the phytotoxic index, a new means of evaluating the efficacy of a given form of therapy is available.

In this way it was found that exposure of pernicious anemia serum in quartz containers to an ultraviolet lamp was followed by a marked

detoxification of the serum. Such detoxification has been made and rendered more complete by the addition of minute quantities of pure eosin. In view of these laboratory findings, and in view of the fact that ultraviolet rays penetrate the skin to a greater extent than hitherto supposed, it was deemed advisable to study the effect of ultraviolet irradiation in clinical cases of pernicious anemia. The results so far have been extremely encouraging, because patients thus treated were improved in their general condition; their blood picture indicated a return to normal; and, above all, the toxicity of the blood serum was markedly diminished. Whether the therapeutic results obtained are permanent or of brief duration, can only be determined by extensive clinical studies. It is hoped that the present work will stimulate further clinical investigation along these lines.

In conclusion, the author wishes to state that he is at present engaged in making phytopharmacologic studies of spinal fluid from normal human subjects and those suffering with pernicious anemia. There is evidence, already, that the pernicious anemia toxin is present in the spinal fluid of such patients and this may throw light on the etiology of the spinal lesions which frequently accompany pernicious anemia. Again, a special study is being made in regard to the absence of free hydrochloric acid in the stomachs of pernicious anemia patients, and an inquiry is being made as to whether the toxin is present in the gastric mucosa. These subjects will be fully treated in due time.

Measurement of Diathermy Dosage

In an article illustrated by graphs and charts, in *Radiology*, July, 1931, Dr. A. Hemingway, of Minneapolis, presents evidence which shows that a thermocouple voltmeter, together with a thermocouple ammeter, would be suitable to measure diathermy heat dosage, since across the tissue the high-frequency current and voltage are in phase. Experiments are reported on the heat production by diathermy currents in tissue, which show that the heat imparted to the tissue can be computed from the effective high-frequency voltage drop across the tissue and the diathermy current.

Inoperable Tonsils Treated by Ultraviolet Irradiation

In *Brit. J. Physical Med.*, June 1931, Dr. Rose A. Foster, of London, recommends treatment by ultraviolet irradiation when for any reason tonsillectomy is contraindicated for diseased tonsils.

The Kromayer water-cooled lamp (with a special applicator) is used by the author, the dose aimed at being one that should produce a third degree reaction of the area irradiated—usually a 30-seconds exposure at 3 amperes and 110-130 volts, by a lamp in routine hospital use.

This treatment is said to have been of real value in the majority of 130 cases in which it was carried out.

BOOKS

Browne: Electricity for Medical Students

MEDICAL ELECTRICITY FOR STUDENTS. By A. R. I. Browne, Member of the Society of Radiographers, Radiographer At the Royal Alexandra Infirmary, Paisley. *Qualified Teacher of Medical Electricity For The Chartered Society of Massage and Medical Gymnastics.* Third Edition. New York and London: Humphrey Milford, Oxford University Press. 1931. Price \$4.00.

This manual is intended primarily to cover the requirements of examining bodies in Great Britain for the granting of their diploma permitting the practice of electricity as applied to Medicine.

There are 3 parts: Part I covers the laws and theories governing electrical phenomena in general; Part II, gives descriptions of medical electrical apparatus; and Part III covers electrical treatments in the various pathologic conditions in which it is applicable.

Chaoul & Adam: Roentgen Study of Digestive Tract

DIE SCHLEIMHAUT DES VERDAUUNGSKANALS IM RÖNTGENBILD: Eine normale und pathologische Röntgenanatomie der Innenwand des Verdauungskanals. Von Henri Chaoul und Albert Adam. Mit einem Vorwort von Ferdinand Sauerbruch. Mit 219 Abbildungen. Berlin and Wien: Urban & Schwarzenberg. 1931. Price geh. RM. 22.50, geb. RM. 25.-.

The authors have collected much valuable data from surgeons and roentgenologists, respecting the roentgen-ray appearances of the mucosa of the digestive tract in health and disease.

The information here given should be of very great diagnostic interest to roentgenologists and clinicians who read German; it opens up a new vista in roentgenologic gastroenterology.

NEWS NOTES

A Martyr to Science

Dr. Guido Holzknecht, chief of the X-Ray Institute of Vienna, Austria, and one of the world's prominent radiologists, died on October 30, 1931, after having had his right hand, then the arm, and finally the left arm also, amputated as a result of lesions produced by the powerful and dangerous rays with which he was daily working.

THE · SEMINAR

CONDUCTED BY

MAX THOREK, M.D., (Surgery)

GEORGE B. LAKE, M.D. (Medicine, Ethics and Economics)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted. Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM No. 10 (Surgical)

Presented By Dr. Max Thorek, Chicago
(See CLINICAL MEDICINE AND SURGERY,
Oct., 1931, p. 737)

Recapitulation.—A man 44 years old, suffering from schizophrenia, had a right inguinal hernia, which was operated upon by the Bassini technic, with resection of a large piece of abnormal omentum which was found in the sac. He had some fever for a few days after operation, but in fifteen days was discharged, with the wound healed.

Two months later an exploratory operation was done elsewhere and a diagnosis made of probable malignant disease.

Readmitted to the hospital of first operation, a history was obtained that the patient had been kicked in the right side of the abdomen four weeks after the hernia operation, after which a tumor developed, which later opened and discharged blood and slime, a similar discharge coming from the rectum. At this time the man had a fever of 99° to 100°F. and a mass the size of a man's fist in the right side of the abdomen, tender on palpation through the rectum. The blood and urine pictures were essentially normal.

Requirement.—Suggest diagnosis and treatment.

DISCUSSION BY DR. CLEMENT H. ARNOLD,
SAN FRANCISCO, CALIF.

Like the confusing main theme in a

detective story, placed purposely to mislead, the emphasis upon this patient's injury is misleading. "*Post hoc, ergo propter hoc*," has been one of the principal obstructions to clear thinking and logical conclusions, not only in philosophy, but in all intellectual and scientific pursuits.

With the lack of any pathologist's report upon the nature of the omental mass removed at the first operation, it is speculative whether the man was suffering from a congestive and obstructive condition in that portion of the omentum, due to its partial strangulation in the inguinal canal, or whether the omentum was a simple omental hernia but was indurated, due to contiguity to a malignant mass which was not discovered at this operation.

The diagnosis which one would wish to make, dialectically and categorically, at his last admission to the hospital after he was injured would, of course, be some form of malignant disease; but it is unusual for malignancy to develop with such rapidity.

It is quite within the bounds of probability, I believe, that the injury could have been sufficient to cause trauma to the wall of the cecum, with the development of a large hematoma, which would have seeped into the bowel and through the anus, and also have presented its major face working along the abdominal suture lines and thus out of the lower end of the longitudinal wound. In the absence of a definite description of the nature of the sero-sanguinous discharge and the nature of the edges

of this fresh wound, it is impossible to speak with certainty.

We must not permit the diagnosis of malignant disease, made at "the other hospital," from a biopsy, to color our opinion. Postoperative indurated scar-tissue has been mistakenly diagnosed as a malignant tumor ere this; but some weight must, nevertheless, be attached to this report.

My conclusion would be as follows:

1.—Perforating hematoma following injury, presenting outwardly at the lower end of the wound and within the wall of the cecum, upon which it had been formed.

2.—Malignant tumor, probably sarcomatous, which had been cryptic and unrecognized, brought to view by operation, accident, etc.

My procedure would be as follows:

1.—A further biopsy to determine, if possible, the nature of the process; if malignant, a complete examination with x-rays, proctoscope, etc., to determine whether or not the condition was operable; and if none of these methods were applicable, an exploratory operation.

One may easily speculate further as to some tumor of the urachus; dermoid, with or without malignancy, etc., ad infinitum, but it seems to me that the most simple and most common conditions would be the elements of the diagnosis.

DISCUSSION BY DR. W. B. GERHARD,
CHICAGO, ILLINOIS

From the history of this case and the study of the manifestations presented, it appears that this man did not suffer any loss of weight, cachexia, pain or tumefaction in the right lower abdominal quadrant, at the time when the operation for hernia was performed.

From this it appears that, had a malignant condition been present, it would have been discovered during the operative procedure for the repair of his hernia.

The time that has elapsed between the first and second operation is of too short duration for malignancy to develop; although such possibility must be kept in mind, particularly in the case of sarcoma.

It seems to me that, taking every factor into consideration and keeping in mind that a resection of adherent omentum was done, and that a number of buried catgut sutures had to be inserted, and coupling this with a history of recent injury following the operation, it is likely that an abscess developed in the omentum, which

encroached upon the bladder and affected the abdominal wall.

My diagnosis, therefore, is a suppurative process in the omentum, encroaching upon the adjacent structures.

The treatment I suggest would be exploration by laparotomy of the structures involved and their proper surgical treatment.

DISCUSSION BY DR. JAMES P. TYE,
ALBANY, GA.

I am of the opinion that this patient has some acute, non-malignant inflammatory condition. It is very unfortunate that the patient was explored without careful records being obtained. However, in view of the fact that this thing came on immediately following trauma to the abdominal wall and ruptured four weeks from the date of injury, and in the presence of an absolutely normal blood picture, I had rather think that the condition was not malignant.

I am of the opinion that this man, at the time of injury to the abdominal wall, had a rupture of a small blood vessel, deep in the abdominal wall, with a resulting hematoma. Naturally, the line of least resistance would be towards the abdominal cavity. The peritoneal involvement probably caused adhesions between itself and the lower bowel. Later there was rupture of the hematoma into the lower bowel, as well as to the external surface. The mass that is now palpable is probably a mass of adhesions between the peritoneum and the lower bowel.

The treatment would be of an expectant nature. Probably it will take care of itself, since the thing has drained spontaneously.

I am aware of the fact that, in reviewing a case record like this, one might overlook the essential pointer to the correct diagnosis, whereas, the man on the ground floor is able to observe the patient and would be able to exclude many possibilities that might be discussed, from a record of this kind.

DISCUSSION BY DR. J. R. STURRE,
MINNEAPOLIS, MINN.

The hernia operation in this case seems to have been successful and uneventful and should, I believe, be ruled out of the present picture.

Many lesions are to be considered in this case: torsion of the remaining omentum; omental cyst; carcinoma of the omentum; tuberculosis of the cecum; hematoma of the

abdominal wall; etc., but none of these seem to fit the case exactly.

The most reasonable *diagnosis* seems to be: traumatic injury to the intestine, with perforation, which was followed by a localized abscess in the right, lower quadrant. This opened through the skin and also into the bowel, accounting for the discharge in both directions. The wound in the bowel has probably healed, leaving the abscess with a skin opening only.

The biopsy report, "probably malignant," means nothing. It might have been chronically inflamed tissue. The tumor is probably the indurated wall of the intestine, the cecum being most likely.

A roentgenologic study of the intestinal tract, after giving barium by mouth and by rectum, is indicated, if it is practicable.

The *treatment* should be conservative: Keep up the nutrition; keep the wound clean and well-drained until the tissues are healthy; and then attempt closure with adhesive strips or debridement and secondary closure with sutures. Developments during convalescence might necessitate other measures.

DISCUSSION BY O. J. SCHOTT, CHICAGO, ILL.

In diagnosing this case one must take into consideration every possible factor.

In line with this thought, we must keep in mind the possibility of a gumma which has undergone softening.

Before proceeding to do any surgery it would be wise to subject the patient to a thorough course of anti-luetic treatment.

DISCUSSION BY DR. F. D. LAROCHELLE, SPRINGFIELD, MASS.

The first thing that arrests my attention in studying this problem is the advisability of operation for this hernia. Very likely no fee was paid for this service, and would it not have been as well to allow this man to wear a truss or possibly submit to treatment by injections? There is a risk attending all surgical procedures and this should not be assumed unnecessarily.

It is apparent that a complete study was not made of this case before undertaking treatment. Of course, 25 years ago, that was the custom, but today it certainly is wise to get a complete history, make a thorough physical examination, do such laboratory work as is indicated and, in obscure cases, obtain a consultation before

deciding on operative treatment. Deviation from this course sooner or later results in dissatisfaction. It is always best not to undertake any surgical procedure until the patient's condition as a whole is known and the probable relief from treatment weighed against the disadvantages that are common to all operative procedures.

The operation for the hernia was apparently successful, although the rise in temperature and the gradual decline would suggest that something was wrong. The matter of trauma is hard to evaluate.

At the second operation a probable diagnosis of malignant disease was made. That is not satisfactory. It is evident that a thorough study of the patient was not made before exploration and there is no reason why the records should not be available for the benefit of the first hospital. To justify the advice to remove an abdominal tumor, its site and nature should be known, certainly after exploration.

This case reminds me of a patient who came here for treatment some time ago. A woman in the early thirties missed her periods and thought she was pregnant and something in the way of operative procedure was attempted, without result. A week after this the patient was taken suddenly ill with pain in the abdomen. Clinical examination suggested an inflammatory process. Operation revealed a perforated diverticulum of the sigmoid and no pregnancy. Drainage resulted in a cure. In the patient under discussion, it is probable that the hernia and the abdominal condition are entirely independent. It is wise always to keep in mind the possibility of concomitant conditions.

The physical examination here is incomplete. A thorough study of the genitourinary and digestive tracts should clear up some of the obscure points. I should be specially interested in seeing a flat plate of the abdomen and another after a barium enema.

The blood examination would seem to exclude malignant disease. On the whole, the clinical study here is insufficient to make a definite diagnosis and I should begin all over again. A very complete history, a thorough physical examination, including cystoscopy, sigmoidoscopy, and x-ray films, biopsy of the wound, microscopic examination of the wound secretions and feces, bacteriologic study of se-

cretions and examination of feces for parasites—all these, with a determined purpose to ferret out the nature of the condition would, to me, be the first step in an attempt to solve this problem.

DISCUSSION BY DR. B. B. PARKER,
ALLERTON, IA.

This problem presents unusual points, but such a case might occur in any surgical practice.

It was unusual that the omentum showed inflammatory changes at the hernia operation, and also that the patient had fever for six days after a clean herniorrhaphy for which preparation had been made.

The fact that the patient was shown, by physical examination, to be practically normal below the eyebrows should, I believe, preclude serious consideration of carcinoma, sarcoma, tuberculosis, actinomycosis and syphilis. A biopsy of the omental tissue removed at the first operation might have saved us some hard thinking now. Moreover, the suddenness with which the condition developed practically rules out carcinoma and tuberculosis.

I feel that only two conditions need to be seriously considered here:

1.—*Inflammatory tumor, involving the omentum and abdominal wall.*

These tumors are known to develop, sometimes quite suddenly, following abdominal operations and hernioplasty. We are sure that there was an inflammatory reaction following his operation. At the time of his second operation the adhesions would render exploration of the abdomen difficult, if not impossible, and the discovery of enlarged mesenteric glands would simulate malignant disease.

2.—*Hematoma, caused by injury received and later becoming infected, from the blood stream or otherwise.*

I think it perfectly possible that this man received an injury severe enough to produce a hematoma and that, either at the time or on account of the inflammatory reaction following, the omentum would become adherent to the involved area and add to the mass and very much to the difficulties of exploration. An infected hematoma might open spontaneously, and clear up very slowly, even when incised and packed. The discharge from an inflammatory tumor or infected hematoma involving fatty tissue, whether omental or involving the abdominal wall, might very readily be "slimy." It is conceivable that

an opening into the gut was also present, but that is a guess.

I believe that the diagnosis favors *inflammatory tumor*, involving both the omentum and abdominal wall, and that the condition present in the abdomen, that led to a diagnosis of cancer, was the reaction of the surrounding tissues to the inflammatory condition.

If malignant disease is correct, we are undoubtedly beyond the place for surgery.

I believe that, if that man were to come to me today and that I found conditions as described, I would give him a deep roentgen-ray treatment of the involved area and direct him to return in two weeks for observation. If, upon return, I found the mass to be smaller and the secretion lessened, I would feel that expectant and symptomatic treatment should be followed out.

SOLUTION BY DR. MAX THOREK,
CHICAGO, ILL.

This problem deserves thorough discussion. Before doing so, however, I would advise my readers to recapitulate the salient features of the case history. This is of utmost importance.

With the facts as outlined in the history, let me proceed to describe the further course of this surgical entity.

A blood Wassermann and spinal fluid examination proved negative. The condition of the patient becoming progressively worse, surgical exploration was decided upon, which revealed the following:

Upon opening the abdomen, a large mass which engulfed the cecum, the ascending colon and the urinary bladder was discovered. It presented the appearance of a malignant mass. Tracing the tumor-mass in the median and upward direction, it was found to be directly connected with the omentum: In other words, there was a sharp line of demarcation at some distance between the normal omentum and the pathologic mass. Medially and above, the tumor was bounded by healthy omentum; laterally and above, by normal-appearing ascending colon; below, after embracing the beginning of the large bowel and half of the bladder, the mass dipped into the small pelvis behind the symphysis pubis. In consistency the tumor-mass was firm throughout, except at the middle portion, where some fluctuation was noted. The introduction of a trocar brought forth a

thick, creamy mass. A smear examined showed staphylococi.

A thorough search for palpable lymph glands disclosed some lymphadenopathy along the bowel involved, but the glands were not hard and did not impart the sensation felt in glands harboring malignant metastases.

We then proceeded to the detachment of the mass, although such procedure was fraught with danger, the thought of a possible malignant involvement, requiring resection of a portion of the bladder, the removal of the cecum and a portion of the ascending colon, supplemented by an ileocolostomy and, perchance, with the necessity of an implantation of the right ureter into the large bowel, seemed imminent—a formidable undertaking, to be sure, but almost anything in the way of therapy seemed justifiable!

In examining the bowel, a line of cleavage was found between the tumor mass and the cecum. The introduction of a gloved finger and gentle manipulation along the line of cleavage disclosed that, while the pathologic mass was rather intimately attached to the serosa of the bowel, it did not penetrate it. It was now possible to separate the mass bluntly from the large bowel, from the right side of the small pelvis and from the bladder. After about twenty minutes of blind but meticulous separation with the finger, I found the entire tumor mass free and suspended above by the normal omentum. It was then delivered into the wound; the raw surfaces from which it had been separated were packed with lap-sponges wrung out of hot saline solution (the bleeding being rather free); and the entire mass was ablated from the healthy omentum.

At the completion of the removal of the tumor-mass, it was found that the greater part of the large omentum had been involved in the pathologic process. A careful survey of the field of operation disclosed that the bladder, bowel and pelvis were now free, with the exception of the affected areas delineating the territory to which the tumor mass was adherent.

Hemostatic, washed-out iodoform packs were now introduced against the raw surfaces; multiple cigarette drains were inserted; the wound was closed and the patient returned to bed.

The postoperative course was stormy for about forty-eight hours, after which rapid

progress was made and the recovery of the patient was uneventful.

The gross specimen was opened and disclosed a large abscess, about the size of an orange, surrounded by thickened omentum, inflamed throughout.

The microscopic specimen showed the case to be one of omental abscess, which developed at the site of the first resection during the herniorrhaphy. The inflammatory process extended from the primary focus in the omental stump in the direction described above. The gross appearance was, as stated, that of a malignant tumor. Careful microscopic study, however, failed to reveal any trace of cancerous transformation of the structures composing the tumor mass.

During the operation, the thought of what type of tumor we were dealing with was uppermost in my mind. It is known that primary tumors of the peritoneum are, as a general proposition, rare, and to most surgeons something extremely difficult to cope with. On the other hand, secondary tumors are rather common and of great practical importance. The most important neoplasms, in this anatomic situation, to be considered are lymph-cysts of the mesentery, tuberculosis, carcinoma, inflammatory tumors and other rare entities, such as enterocystoma, congenital cysts, etc.

I failed to make the correct diagnosis in this instance, prior to operation and microscopic report. However, I am elated to find that Dr. Gerhard and Dr. Parker suggested omental suppuration as the cause for the trouble, although Dr. Tye suggests some non-malignant inflammatory condition, which was verified at the operation.

The criticism of Dr. LaRochelle are rather exacting. I feel that I am not mistaken in the assertion that with the vast majority of surgeons, operative procedure is definitely established in hernia. As a matter of fact, the patient came in for relief of rupture. The main factors in the problem pertain to subsequent conditions that developed, for which diagnosis and suggestion are sought.

It is regrettable, of course, that the hospital refused to give us the results of their biopsy and there was no alternative but to explore when malignant disease was suggested. As a matter of fact, the open wound, the indurated area and the failure of the wound to heal, had definite earmarks of malignant disease.

I admire Dr. LaRochelle's punctilious exactness, but I wonder whether, from a practical point of view, even though the diagnosis was obscure, it was justified in this individual to do cystoscopy, sigmoidoscopy, radioscopy and other procedures that the doctor suggested, in preference to an endeavor at directness.

PROBLEM NO. 12 (SURGICAL)

PRESENTED BY DR. JAMES P. TYE,
ALBANY, GA.

Lizzie J., negress, school teacher, 40 years of age, was taken ill in the midst of a life of good health, six weeks before I first saw her. She states that she was ill enough to be in bed but had no particular symptoms, except frequent urination, fever and general malaise. The fever fell by lysis. Now she complains of general aching, asthenia, frequent urination and an occasional temperature of 99°F., in the afternoon.

Physical examination was negative, except for the presence of a mass in the epigastrium, extending into right side. The mass is very hard, not tender, immovable, and about the size of an orange. The left border, at the median line, is rounded; the right seems to disappear behind the liver.

An x-ray plate of the abdomen shows a well-calcified, lobulated mass in the right kidney region, extending to the midline in the upper pole.

Cystoscopic examination revealed a very small, chronically inflamed bladder. The left ureter showed evidence of chronic inflammation, but was easily catheterized; pyelogram and ureterogram, normal. The right ureter was not found after many attempts. An intravenously injected dye was used without avail. Skiodan (50 cc.) was given intravenously. The picture, after ten



Fig. 1.—Postero-anterior Roentgenogram, Showing Ureter and Kidney Pelvis on Left Side and Mass on Right.

minutes, showed a normal left ureter and pelvis; on the right no shadow was seen, and none appeared on the right side after one and one-half hours. (See Fig. 1).

Blood: White cells.....10,800.
Neutrophils79%
Red blood cells.....3,840,000.
Hbg. estimate75%

Urine: Specimen from left ureter negative.

Bladder specimen has a few pus cells, and many motile organisms; no acid fast organisms.

The Wassermann test was negative.

Requirement: Suggest diagnosis and treatment.

THE SUCCESSFUL PHYSICIAN

My idea of the qualifications necessary to the successful practice of medicine is a general, well-grounded knowledge of all the sciences, together with a mental attitude, broad and liberal in its deductions.

The true physician must be a philosopher, a jurist, an arbiter and a peacemaker. He has access to the family skeleton and his wisdom as a counselor often makes (as the lack of it may destroy) the happiness of family life. He must be imbued with the spirit of righteousness and actuated by unselfishness, in the full knowledge of the frailties of his fellow men.—DR. MORTIMORE S. REYNOLDS.

THE · CLINIC

RADIOLOGY

A Radiologic Diagnostic Clinic*

By I. S. Trostler, M.D., F.A.C.R., F.A.C.P., Chicago

WHEN I was asked to present a clinic here, I thought at first that I would give a series of cases where errors in clinical diagnosis had been made by clinicians and these errors corrected by roentgenograms. But thinking better of this, I decided that I would call attention to a few of my own errors, as well as to the errors of others.

My purpose in presenting the subject in this manner, is to call attention to the pitfalls and dangers of snapshot diagnoses and to impress and drive home the necessity and importance of making more careful examinations of even what appear to be the most simple injuries and diseases. It has been my experience repeatedly and often, that what, to all outer appearances and from casual examination, are minor injuries, occasionally prove to be complicated and complex conditions, when carefully and thoroughly investigated. Because of this, it pays to examine every patient carefully and thoroughly.

CASE REPORTS

Case 1.—A man of 35 years was referred for roentgen-ray examination for a fracture of the right side of his lower jaw. Pursuing our usual practice in such cases, examination was made of both sides, and a fracture was found on the left side as well as the right. It is quite possible that, if the man had been treated for only the one fracture, a less favorable result might have been obtained.

*Presented before The North Side Branch of The Chicago Medical Society, May 14, 1931.

Case 2.—A woman of 65 years was sent in for roentgen-ray examination of her right shoulder region. She had had a dis-



Fig. 1.—Impacted Fracture of Humerus in Reduced Dislocation of Shoulder Joint.

location reduced the night before and her physician wanted to be sure that the head of the humerus was in proper position. The resulting roentgenogram (Fig. 1) showed the humeral head in the glenoid cavity; but, in addition, that there was a lightly-impacted fracture of the surgical neck of the humerus. Note how important it was that the attending physician should

know that he was dealing with a lightly impacted fracture, and how, being informed, he could modify the treatment in the right direction.

Case 3.—A man of 30 was referred for examination of his left wrist. Roentgenograms showed a typical Colles' fracture, but, in addition, a simple fracture of the capitellum of the radius in the same arm. Of course, this fracture in the elbow joint did not materially modify the treatment nor the end result obtained, but it was, none the less, important that it be known.

Case 4.—A young woman was recently sent in for roentgen-ray examination of her right wrist. No fracture at or near the wrist was found, but a fracture, with considerable deformity and displacement of the fragments, was found in the upper third of the radius in the same forearm. Had this been left, undiscovered, and union taken place without correction of the deformity, who can tell what might have resulted? The wrist region was badly swollen and nothing pointed to any trouble except in that region.

Case 5.—A vain and stylish lady of 40 (or more) years was referred for roentgen-ray examination of her left wrist, and a fracture in both bones, just above the wrist, was shown; but *we did not examine farther up than the middle of the forearm*. Several weeks later, while examining after the removal of the splint, we found malunited fractures of both radius and ulna in the upper thirds, and it was only through the good offices of and some extremely convincing talk by one of our big surgeons, and a free operation, that a malpractice suit was averted.

Case 6.—A youth of 19, employed on the delivery service of one of Chicago's big department stores, injured his ankle some six weeks before he was sent in for roentgen-ray examination. Fracture was not suspected, but the ankle was "still sore from the injury" (?). Roentgenograms showed no evidence of fracture or other traumatic condition; but *there was a large bone cyst, occupying the lower end of the tibia, which must have been present for a long time* (Fig. 2). If fracture had occurred—and it is surprising that it did not, because there was only a thin shell of bone left—it would have been "just too bad" for the employer. As it now is, the lad can receive appropriate treatment before fracture and the resulting deform-



Fig. 2.—Bone Cyst of Tibia.

ity occurs, and much time and disability will be saved.

Case 7.—A youth of 17 was sent to a commercial x-ray laboratory, conducted by a lay technician, for examination of his left wrist. A report was sent to the referring physician, that "a fracture of the lower end of the left ulna, with fragments in perfect apposition", was present. The lad was sent to us for re-examination about a week later, and our diagnosis was that no roentgen-ray or other evidence of fracture, dislocation, disease, deformity or anomaly was present in that ulna. The epiphyseal line was erroneously interpreted by the technician as a fracture.

Case 8.—A woman of 30 walked into my office with a narrow cotton bandage around her ankle. She did not think that anything was "broke", but her Doctor thought that she had better be sure. Films showed a *complete diagonal fracture of the fibula*. She was able to walk on the leg, because the fibula is not a weight-bearing bone, but she endangered the integrity of the ankle joint with every step she took.

Case 9.—A rather thick-set woman had had a dislocation of her right shoulder reduced a week before but, because of continued pain and tenderness, was sent in for roentgen-ray examination. The film showed the humeral head in its normal

position, and a comminuted fracture of the greater tuberosity of the humerus.

Case 10.—A woman of 50 limped into my office not very long ago, stating that her physicians wanted an opinion of the condition of her hip. There was a scar from an operation. Roentgenograms showed that a large nail had been passed through the femoral neck, but that it did not enter the separated head of the bone at all—just a case of poor carpenter work, done by a man who should be building houses or join Chic Sale's specialists.

Case 11.—A woman of 38 had complained of pain in her arms, forearms and hands for a long time. Her arm muscles were weak and there was a general underdevelopment of all the arm and forearm muscles. She had been treated for neuritis,



Fig. 3.—Double Cervical Ribs.

rheumatism, etc., for years, without any relief. Her physician told me that he thought she had progressive muscular atrophy.

Roentgenograms (Fig. 3) showed that she had double cervical ribs of considerable length, and she gladly consented to have one of these removed at a time. Relief from the first operation was so prompt and evident, that she had the second one operated upon before the time planned for originally. She was markedly relieved in six months and practically cured in one year. Many of these cases go about in agony, and without relief. I reported 65 cases of cervical ribs in the *Medical Record*, in 1921, and have seen nineteen more since then. In the 84 cases of cervical ribs seen by me, the clinical diagnosis was progressive muscular atrophy in 18; neuritis



Fig. 4.—Fracture of Atlas.

in 33; while 24 were correctly diagnosed and the remaining 9 had various wrong diagnoses made by the attending physicians. A careful study of these cases should make nearly all of them easily recognizable.

Case 12.—A man of more than ordinary intelligence had a bad headache, and was advised by his barber to see an osteopath, which he did. According to the patient, "the osteopath did something" (and I certainly agree that he did something), which caused him to have a stiff neck. Then he went to his family physician, who sent him for a roentgen-ray examination. The films (Fig. 4) showed a fracture of the atlas, and it took a long time, with his head suspended by a jury mast, to overcome the result of the experiment.

Case 13.—A man of 40 had been the rounds of a number of physicians because of a persistent backache. He had had a blood Wassermann test made and a negative report returned. He was sent in for a roentgen-ray examination of the painful region of his spine, which proved to be normal; but, upon eliciting his history, I ventured to make a film of his legs, and there found a syphilitic periostitis and osteitis (Fig. 5). Antiluetic treatment gave relief from the backache and the Wassermann test soon became positive, and subsequently became negative. Not infre-



Fig. 5.—Syphilitic Osteitis and Periostitis.

quently we are able to locate obscure syphilitic lesions by means of the x-rays.

Case 14.—A child ten months old, who cried much of the time, was brought in for roentgen-ray examination. It was poorly nourished and palpation of the long bones, particularly those of the legs and arms, seemed to cause pain. Films showed the characteristic lesions of *rickets* and several spontaneous fractures, due to scurvy. This poor little patient had fractures in both tibiae and fibulae.

Case 15.—A youth of 17 complained of a painful heel. An x-ray film showed the presence of a bone cyst of the os calcis, removal of which, by operation, left the lad with a good foot.

Case 16.—A machinist of 35 complained of a swelling on the under and inner surface of his arm. There was no pain nor discomfort, except that he could not bring the elbow to his side. The roentgenogram showed a large osteoma growing out from the shaft of the humerus, which he declined to have removed.

Case 17.—A girl of 16 was sent in by a dentist for examination of a lower jaw, which was painful and had been much swollen for several years. Roentgenograms showed cystic disease of the mandible, with such marked bone destruction that a resection of the horizontal ramus was necessary. A piece of one of her ribs

was implanted, and seven years afterward the deformity is scarcely discernible.

While the end-result in this case was good, if she had had a roentgen-ray examination earlier, much less bone destruction would have occurred and much suffering and surgery would have been obviated.

Case 18.—A rugged, hearty man of 62 was sent in with a clinical diagnosis of cancer of the bladder. No examination other than a urinalysis had been made. The urine contained blood, and that was enough for the physician to make his diagnosis. Roentgenograms showed two stones, about the size of pigeon's eggs, in the bladder. Operation showed no trace of cancer or other tumor growth. The man recovered, but was badly frightened by the snapshot diagnosis.

Case 19.—A woman of 73 was referred, by her physician son-in-law, for an examination of her pelvis. We showed a large, encrusted, rubber-ring pessary, that had been in her vagina for at least twenty years and, of course, had been entirely forgotten. This had to be dissected out, but the patient made a good recovery.

Case 20.—A large, fleshy woman, claiming to be 40 but looking not less than 55, was trying to get some money for damages because of an injury which she alleged was due to a street car accident. She was sent to us for examination of her pelvis, for suspected fracture. Our roentgenograms showed a very large ring pessary, which she admitted she had forgotten that she was wearing. Removal of the ring—it had been there five years, she said—relieved the pain from the street car accident, so she did not sue. This is only one of the many-sided and sometimes amusing cases, where roentgen-ray examinations have prevented damage suits.

Case 21.—A man of 50 was sent in with a clinical diagnosis of stone or tumor of the bladder. Roentgenograms did not show a stone, so an opaque solution was introduced, and films made under those conditions showed a *diverticulum* of the bladder.

Case 22.—A man of 48 complained of pain in the region of the spleen. Gastrointestinal x-ray examinations showed that his appendix did not empty when it should, and that even light palpatory pressure over the visualized appendix produced the pain in the left subcostal region. We did not try to figure out the mechanism of the reaction, but removal of the offending ap-

pendix, relieved the pain in the splenic region.

Case 23.—A woman of 33 complained of indigestion, hematemesis, rapid loss of weight and progressive weakness. She looked sallow and cachectic and, from her history and appearance, I did not blame her physician for making a clinical diagnosis of cancer of the stomach. Careful roentgen-ray studies of her stomach and small bowels showed nothing abnormal. The colon also was normal. Nothing could be found except a rather tender appendix, which retained barium for a week; and when this was removed the patient recovered so rapidly that it was surprising to all connected with the case. She is alive and well after fifteen years.

Case 24.—A woman of 35 complained of pain in the left iliac region. Roentgen-ray examinations showed her heart and lungs to be normal; but there was a *transposition of the abdominal viscera* and her appendix and cecum were located in the left iliac fossa. Her liver was in the left side and the descending colon in the right. Without the x-ray examinations, this rather interesting—and, to her, important—anomaly would not have been found.

Case 25.—An infant of 3 months had been losing weight and was not doing well. It vomited more than usual and pyloric stenosis was suspected. Roentgen-ray examinations of the stomach showed normal emptying; but a film of the thorax disclosed a *large thymus*. Two treatments by the x-rays changed the entire aspect of the child. We could tell of many such cases, as they are much commoner than the average physician suspects.

Case 26.—A woman of 54, who had been treated for "heart disease" for months, and said that she had had so much tin-

ture of digitalis that her pulse became so slow that her physician became alarmed, was sent to us for a roentgen-ray examination of her thorax. This disclosed a normal-sized heart, somewhat displaced to the left because of *fluid and air in the right pleural cavity and a fibrous tuberculosis in the right lung*. Nature was trying to put the diseased lung at rest, and had produced an hydro-pneumothorax in its effort to do so.

Case 27.—A man of 60 was referred for roentgen-ray examination, with a clinical diagnosis of gastric cancer, by a physician who does a considerable gastro-enterologic practice. A series of examinations led us to make a diagnosis of rather advanced and inoperable gastric cancer. Three and one-half months later, the patient insisted that he be operated upon. The operation disclosed a normal stomach and a *carcinoma of the tail of the pancreas*. Going over my films with several well-known radiologic experts, I was assured that the diagnosis made was justified, but only as far as we went. We did not make an examination of the feces for fats.

The foregoing cases are presented, because so many of them are the result of mistaken, snap-shot diagnoses. Many of these patients were merely glanced at by their attending physicians and a quick guess made.

I want to call attention to the fact that, in nearly all of these cases, had a careful and thorough study been made, and had the patient been really examined, few of the errors would have occurred, so I wish to say it again, and to drive it home:

IT PAYS TO EXAMINE EVERY PATIENT CAREFULLY AND THOROUGHLY.

25 E. Washington St.

IDEALS AND CRIME

Though the most mischievous ideals are social ideals which have become institutions, laws, and creeds, yet their evil must come to a personal point before they can strike down the individual. Jones is not struck down by an ideal in the abstract, but by Smith making monstrous injustices on him in the name of an ideal. . . . What makes the bad side of idealism so dangerous is that the wicked people are allowed to commit crimes in the name of the ideal, that would not be tolerated for a moment as open devilment.—GEORGE BERNARD SHAW, from *The Stomatologic Record*.

CLINICAL · NOTES AND PRACTICAL · SUGGESTIONS

The Treatment of Pneumonia

IN READING the articles on the treatment of pneumonia, I find that most, if not all, are interesting; but to the general practitioner who treats, perhaps, eighty percent of his pneumonia cases in the home, a great many of them are impracticable. He does not have hospital facilities for all his patients and he has to do the best he can with what he has. Fortunately, it is a disease than can be treated about as well in the home as in the hospital, if one can secure proper nursing and watching, by a person competent to do that work.

In our quest for something new and something different, I think we often forget some of our oldest and most trustworthy remedies and are prone to treat the patient as though he were a machine, and to treat a particular disease as though it were some special part of the machine, apart from the rest. It seems to me futile, if not actually harmful, to begin to treat the heart, with digitalis, etc., in the early stages of pneumonia. If the pneumonia case is treated properly, the normal heart will not need tonics nor stimulants in the ordinary case.

In the past several years in general practice, I have treated a series of something over a hundred cases of pneumonia, including all types and stages and all grades of severity, and my mortality rate has been something less than 3 percent in the series. About 20 percent of these patients were handled in the hospital and the others were treated in the homes. Those treated in the hospital were practically all of the most severe type, and of these the mortal-

ity was about 10 percent, or considerably higher than the average.

As a small boy in school, one of the earliest things I recall in regard to physiology was that one day the teacher told us that, to a certain extent, we breathed through the skin. I did not believe it, until after I began to practice medicine and had the care of pneumonia cases. Then I began to realize the truth of the homely statement, and the longer I practice and the more I see of that kind of cases, the more I am impressed by it.

The first stage of pneumonia of whatever type is congestion. The infection is incidental to the congestion. The congestion in the lung is not the result of infection, but rather the congestion favors infection and in itself is the result of suppressed secretions. The lungs fill with serum, producing congestion, and the serum becomes infected. So the first essential in treating any case of pneumonia is to reestablish elimination through the skin and kidneys. If this is done promptly and thoroughly, there will be no necessity for the use of heart tonics and stimulants, where there is a normal heart to begin with, and the mortality rate will be materially lowered. Free elimination once established, the next thing to do is to keep it up, and if this is done properly the heart will take care of itself. Whenever a patient lies for several days with a hot, dry skin, however, the heart is bound to feel the effect by being overworked; the serum in the lung becomes infected; the disease enters upon the second stage, which is

harder to handle but, even in this stage, elimination is of first importance. Most pneumonia patients who die, drown in their own secretions.

In this series there have been some complications in all the fatal cases. One was a baby eight months old whose parents said it had had a "severe cold" for a week before I was called. The baby died of bowel stasis, after the lungs were practically clear. Another was a child about four years old, who had had *santonine* poisoning two weeks before pneumonia developed, and who also died of bowel stasis. The other was a woman about forty-five years old, who had been clear of fever for thirty-six hours and who, on her fifth day in the hospital, died suddenly of pulmonary embolus.

In all these cases I have never given a dose of *digitalis* and in only one case was any drug usually known as a heart stimulant used. That was a case where the patient was cyanosed when I arrived and the heart was badly fatigued. A stimulant was given to tide her over until a sweat could be induced, after which the heart took care of itself and she made a successful but, of course, stormy recovery.

During this time I have seen but two cases of *emphyema*. One was proven tuberculous, and the other I was not able to follow up, but was of the opinion it also was tuberculous. I have never used any of the ordinary coal-tar products as antipyretics in these cases.

A great deal has been said against moving pneumonia patients. I never hesitate to move one, if the surroundings are not suitable for proper care and treatment. If a patient is to be removed, however, it should be done before any attempt has been made to induce sweating and while the fever is still high. I have moved them after sweating, in case of a relapse from exposure, without any untoward results. I moved one case early in the spring, over roads so bad that it required three hours to make the trip to the hospital, and that in an open car. This was done before any treatment was instituted and the recovery was uneventful, except that the time required for recovery was considerably longer than ordinary.

I have no patience with the cold-air treatment nor the expectant treatment in pneumonia. Pneumonia needs *immediate* and *vigorous* treatment. Not many drugs

are required, and when the right ones are used at the right time and the proper nursing provided, the mortality in this dreaded disease will be greatly lowered and it will have lost a great deal of its terrors, for both the doctor and the patient.

DRUGS AND THEIR USES

It seems that in our efforts to keep up with the times we grab at something new or different and forget the old and tried remedies that have served us so well in the past; and a great many of us have forgotten, or never knew, the real value of some of our common drugs that are available to every one; for instance, that *asclepias* is an excellent sudorific and that it leaves little, if any, of the depressing effect of some of the others; that *bryonia* is a most active and useful drug in all inflammatory conditions of the serous membranes; that *aconite* is an excellent drug in high fevers, with a hot, dry skin, and that it is especially applicable in the case of children; that *belladonna* relieves congestion; that *lobelia* is a wonderful relaxant; and even that a large draught of lukewarm salt water will often relieve a case of acute indigestion or acute dilatation of the stomach more effectively and quickly than will morphine.

The few drugs needed require careful and judicious administration and the patients require the best of nursing. I will not take up the space for a full outline of treatment, but will give enough to suggest the general idea. Each individual case may require some special care as it progresses.

Here is a typical case:

History of exposure a day or two previous to the onset, which may be ushered in with a chill, high fever (103° to 105°F.), severe headache, pain in the chest and grunting expiration, harsh cough with possibly some streaks of blood in the sputum.

If these symptoms have lasted for 24 to 36 hours, with a hot, dry skin and a full, bounding pulse, my treatment would be about as follows: Have the room warm (preferably in a hospital, of course), put the patient to bed, with some hot-water bottles and, if necessary, put on an extra blanket or two, and then give the following prescription: *Asclepias*, 2 drams (8 cc.); morphine sulphate $\frac{1}{4}$ grain (16 mgm); with enough water to make five drams (20 cc.), and of this give one dram

(4 cc.) every 30 minutes, in a hot drink—hot water or hot lemonade—until the patient is sweating (not just perspiring). He should sweat for three or four hours and sleep, or at least be comfortable, from the morphine during that time.

After a thorough sweating, he is given a brisk, dry rub, under cover; the wet linens are replaced by warm, dry ones; and the extra blankets are removed. This is for the adult patient, and might have to be varied somewhat according to the ease with which the sweat is induced; and, in children, the dose must be varied, according to the age, though the age limit, either way, is no contraindication. Sometimes one or two doses will be sufficient, and others will require all of the mixture. In the robust adult, no harm will be done by giving it all at one dose.

After the severe sweating stage and the dry rub, I use a prescription about as follows. Bryonia, 40 drops (1.33 cc.); asclepias, 2 drams (8 cc.); water to make 4 ounces (120 cc.); with enough morphine or codeine added to give relief from pain, so that the expectoration, if any, will be made easier and the cough not so much avoided on account of pain. Of this mixture I give 1 dram (4 cc.) every 2 to 4 hours, according to the height of the temperature and the condition of the skin. The skin should be warm and covered with a film of moisture at all times. Give plenty of water, lemonade (lemonade preferred) or orangeade, with ordinary light diet after the first day or two, according to the appetite.

Aside from an occasional laxative, this is about all that will be required in the ordinary case that is treated early, and the recovery is usually uneventful and rapid, unless the condition has progressed beyond the congestive stage before the initial treatment is begun, when the recovery may be considerably slower and somewhat stormy for a few days. I have seen many typical cases, such as that described, aborted in from one to four days, with complete recovery within a week or so.

The greatest trouble I have with this form of treatment is in babies and small children, too young to spit out the material which is coughed up from the lungs or bronchi, and unless the offending material is kept flushed out of the stomach and bowels they become toxic from it and have a tendency to paralytic ileus.

Asclepias is the best of a number of sudorifics I have tried and, while a subnormal temperature may follow when it is given in large doses, the depression is not profound nor lasting, as it is with some of the others, and a little applied heat or a light stimulant, such as a cup of hot coffee, will usually correct the condition in a short time and with a general feeling of well-being as the result.

The few drugs I have named are about all I ever have occasion to use, except that occasionally, in stubborn cases, I apply a poultice of Numotizine to help to induce sweating, but it must be used with some caution on small children. Or, in its stead I sometimes use a mixture of olive oil and turpentine over the affected area, with some external heat applied.

In small children, lobelia is very helpful for its relaxing effect and, if there is a great deal of restlessness and inability to sleep, I use barbital or some of the other somnifacients for a night or two, but it is usually only in the more severe cases and during convalescence that it is needed. A patient who is not sleeping is not doing well.

Occasionally a cough syrup is used to clear up a residual cough from bronchial irritation, but during the severity of the attack I consider them practically useless. Careful watching of the temperature and the skin condition is one of the essentials to success in this treatment.

I use Lloyd's drugs in these cases, because I feel that the dosage is easier to regulate and the strength of the drug very dependable.

There are a great many phases of the treatment that can not be outlined in this short space and I would not have the inference drawn that every case in this series has run smoothly, for I have had a great many anxious hours over some of them, but it is the final results that count.

RECAPITULATION

In pneumonias of all types, congestion precedes and facilitates infection.

Pneumonic infections are secondary to congestion and not the cause of congestion.

Pneumonic congestion is due, in the ordinary case, to suppression of secretions or to some element causing vasoconstrictions in the peripheral circulation.

The first essential in treatment is free

elimination of fluids, especially through the skin.

Patients should be kept as free from pain as possible, to facilitate cough and free expectoration.

With proper care and treatment, heart stimulants and tonics are rarely needed.

The mortality rate in pneumonias is far too high and most pneumonia deaths are the result of the patient drowning in his own secretions.

C. H. KENNEDY, M.D.

Fort Smith, Arkansas.

The Management of Psychic Patients*

ALL PHYSICIANS should have a general working knowledge of psychic diseases; and the man who knows the entire family background of the patient best, will have the greatest success in readjusting abnormal personalities.

The diagnosis of the milder and more severe mental disorders must be made and prophylactic measures must be applied, in childhood, if the best results are to be obtained. This means, as a rule, that the family physician must do it.

Adults who are psychically maladjusted should be removed from their home environment, especially if there are children in the family.

All of the larger cities should have psychiatric clinics, as a public health measure; and all general hospitals should have psychiatric wards, so that all physicians will become familiar with these cases. The leadership in these matters must be in the hands of the medical profession in general, not solely in those of psychiatrists.

ROSS McC. CHAPMAN, M.D.

Baltimore, Md.

Typhoid Prophylaxis

FAILED to report the first case promptly to local health officials appears to be an important factor leading to the development of 18 cases of typhoid fever in two outbreaks, 12 of which occurred in two families in Illinois, where, according to newspaper accounts, 8 members of one family were sick with the disease, three patients had been sick for fully two weeks and three more for fully

one week before the local health officer had any report of the illness, so far as the records of the State Department of Public Health show.

This delay made it impossible for the city or State health officials to do anything toward controlling the spread of the disease to other members of the family or to the public.

Vaccination of contacts or even probable contacts is of the greatest importance in controlling outbreaks in families and neighborhoods. There is good evidence to show that vaccination, when given too late after exposure to prevent the disease, will shorten the duration and lessen the severity of the attack.

There is a strong tendency to blame the water supply or flies or perhaps milk for an outbreak of typhoid fever and regard the question of the source as completely and satisfactorily answered. Where did the contamination in the water come from? Where do the insects pick up the germs which they carry? There must be a human case or carrier somewhere in the vicinity. Without locating this individual, the original source of the outbreak, as well as a dangerous focus for future outbreaks, has not been located. Water and food are never polluted with typhoid fever germs except through waste matter from a human patient or carrier.—*Illinois Health Messenger*, Oct., 1931.

Send for your copy of "What About Heart Diseases." Educate your patients.

Hydrocyanic Acid Gas for Fumigating

THE use of various fumigating materials, particularly hydrocyanic acid gas, should be carefully considered. Hydrocyanic acid gas is a deadly gas, and persons unfamiliar with its use and effect should not expose themselves to it. Trained fumigators can handle the most deadly gases with safety, both to themselves and others; on the other hand, it is quite as true that, in the hands of the uninformed or careless many forms of fumigation are a menace to all concerned.

Fumigating materials, particularly the deadly gases, should be handled only by persons trained in their use and who have the necessary equipment, such as gas masks,

*Abstract (by G. B. L.) of a talk at the Sheppard-Pratt Hospital, Baltimore, Md., Mar. 24, 1931.

to protect themselves as the occasion requires. These gases should never be used without the full knowledge and consent of the local public health or police authorities. Hydrocyanic acid gas should never be used in buildings without combination with a warning gas.

U. S. PUBLIC HEALTH SERVICE.
Washington, D. C.

[Physicians living in communities where fumigation with gases is still demanded, by local ordinance or public opinion, after quarantine for communicable diseases, and those who have occasion to destroy rats, insects and other vermin on a large scale, will do well to familiarize themselves with the powers and limitations of the gases so used, and with the technic of their application.—Ed.]

Vitamins*

The relationship between vitamins and other constituents of the adequate diet may be compared to the relationship between the building materials and the workmen employed in building a house or similar structure. In fact, the building of a house and the building of the human or animal body are quite similar in many respects.

When building a house one obviously needs stones, bricks, lumber, cement, hardware, glass and many other materials. Most important of all, it is necessary to have workmen. Similarly, in building the human or animal body, it is necessary to have various food constituents such as proteins, fats, carbohydrates and mineral matter—and last, but not least, workmen or vitamins are needed.

With plenty of building materials available and the workmen on a strike, no house is built. Also with plenty of food constituents and no vitamins at hand, little progress is made in the growth and development of the human body. Efficient building operations require that workmen be specialists. That is why we have masons, carpenters, electricians, and interior decorators. In other words, one does not expect the electrician to do a mason's work in laying a cellar wall. Likewise, the various vitamins perform special functions.

ARTHUR D. HOLMES, Ph.D.
Boston, Mass.

*Adapted from *Patchwork*, Sept.-Oct., 1931.

Non-Specific Epididymitis and Ethics

A YOUNG man, about 24 years old, noticed a slight urethral discharge. He had not been exposed to infection; in fact he had never had sexual intercourse in his life.

The physician whom he consulted informed him that he had gonorrhea, and that the fee would be \$125—\$15 down payment and the balance on installments.

After leaving the Doctor he became suspicious that he did not have the disease, and decided to see his regular physician. A microscopic examination of the discharge showed that he had simple urethritis. Later he developed epididymitis although no instrumentation or irrigation of the urethra had been employed. The urethritis cleared up on using an antiseptic and astringent injection, and the epididymitis responded perfectly to sodium iodide given intravenously.

R. S. MACARTHUR, M.D.
Los Angeles, Cal.

[It seems hardly necessary to comment upon the utterly reprehensible, if not criminal, conduct of the first physician in this story. If he made no microscopic examination of the patient's discharge before announcing such a diagnosis, he was guilty of criminal negligence, at the least. If he made an examination, and then worked upon the patient's fear to defraud him of his money, he is the most despicable sort of quack. In either case he is not fit to practice medicine.—Ed.]

Send for your copy of "Who's Your Health Banker." Ready now.

Medical Talks to Laymen

MORE and more, physicians are being asked to speak on matters pertaining to health and hygiene, before clubs, societies and other groups of men and women; and this is as it should be, for it gives them an opportunity to exercise one of their most important functions—that of instructing the public regarding the best methods for keeping the physical organism in a high state of activity and resistance to disease.

Since many men, who might be called upon to do this vitally necessary duty, have had little or no practical experience in public speaking and find it hard to select a subject, here is a good list, from which any

physician ought to be able to select one with which he can deal, not only instructively, but also entertainingly.

Each year should see more of this essential effort being put forth all over the country.

SUGGESTED TOPICS FOR TALKS*

General

- 1.—Financial Value of Health.
- 2.—The Business Man and His Stomach.
- 3.—Disease Prevention and Health Preservation.
- 4.—Health Problems in Our State.
- 5.—Animal Experimentation in Relation to Human Welfare.
- 6.—What Everyone Should Know About Cancer.
- 7.—Health vs. Business Inventories.
- 8.—Physical and Mental Health.
- 9.—What Every Woman Should Know About Cancer.
- 10.—Our Duty to the Child in Prevention of Communicable Diseases.
- 11.—Preparing the Child for Adolescence.
- 12.—The Parent and Child Relationship.
- 13.—Medical Science Protects the Child.
- 14.—Prevention of Disease.

(The last 6 are especially adapted to Womens Clubs and Parent-Teacher Associations)

For High School Assemblies

- 1.—Our Debt to Medical Science (Story of some famous scientists).
- 2.—Some Important Phases of Health.
- 3.—The Story of Infections.
- 4.—Health Lessons Learned from the World War.
- 5.—X-Rays and Radium.
- 6.—What Every High School Boy and Girl Should Know About Cancer.
- 7.—Health and Happiness.

GEO. B. LAKE, M.D.

Chicago.

Mishandled Psychic Patients*

OUT of 50 patients (30 women and 20 men), 12 had been unintelligently treated before entering a psychiatric hospital. This is not surprising when we remember that our medical colleges give their students little or no instruction in how to deal with these cases, which make up half of general practice.

*Adapted from *Bul. Chicago M. S.*, June 27, 1931.

*Abstract (by G. B. L.) of a talk at the Sheppard-Pratt Hospital, Baltimore, Mar. 24, 1931.

The chief symptoms in these cases are likely to center about the genital and digestive systems. We must not forget that mental pathology is as important as physical.

Here are brief outlines of the histories of several of these patients:

Case 1.—A female, age 41, was admitted to the hospital in manic frenzy. She had borne one child and had two abortions. Dilatation and curettage had been performed and she had been sterilized. After entering the hospital it was found that she suffered from generalized syphilis and paresis.

Case 2.—A woman came complaining of dysmenorrhea and sexual frigidity. She had left her husband and had been overdosed with thyroid. She was found to be suffering from *involutional melancholia*.

Case 3.—A woman, 36 years old and married to a man fourteen years her senior, had had one child and one abortion and complained of severe and constant headaches, for which large doses of analgesic and narcotic drugs had been prescribed. She was found to be a psychopathic personality and was admitted in *drug delirium*.

Case 4.—A woman, 55 years old, a virgin, had been a roving invalid for years and, in her various encounters with doctors, had had cystoscopy performed three times. This had a symbolic value, for her. She was a typical psychoneurotic. These women have a compulsion to fall in love with doctors, ministers and other women's husbands; and this fact can be used, by a highly diplomatic physician, in the treatment of the case.

Case 5.—This was a depressed and stubborn woman, who had suffered from constipation and dysmenorrhea since girlhood, for which drugs and surgery had been applied without result.

A carefully-taken history revealed that she had masturbated for years, had worried over that fact and had read "doctor books" in an effort to find help. She had loved one man, married another and had an extramarital love affair. All these things, which had preyed upon her mind and aggravated her condition, were wholly unknown to the physicians who had treated her.

Case 6.—A delicate woman of 27 years, who, because of her real or fancied frailness, had never done any work (she did not have to work if she was "sick"). Her parents had never shown any affection for her

or for each other. Her husband, with whom she quarrelled bitterly, was definitely psychotic and masturbated in her presence.

This woman's condition had been diagnosed "nerves," tuberculosis, anemia, and "nothing the matter."

Case 7.—A man of 45 years, the narrow-minded son of a minister, was inefficient, ill-humored and suffered from loss of appetite and insomnia. He had had an appendectomy and had been told that nothing was wrong with him.

It developed that he had had a mild flirtation with a woman, in the course of which he experienced an orgasm on casually touching her. His distress over this circumstance was the cause of much of his trouble.

Case 8.—A medical student, had been treated for sinusitis, astigmatism and a number of other things, when he was definitely schizophrenic. No thought seems to be given to psychic conditions if there are local symptoms pointing to a specialty.

LEWIS B. HILL, M.D.

Baltimore, Md.

Educate your patients. Your copy of "What About Heart Disease?" is ready now.

Institute of Sexology

IN NEW YORK CITY, an Institute of Sexology has just been opened at 627 West 113th St.

The frank discussion of sexual and marital problems in recent years has emphasized the paramount importance of the sexual life for the health and happiness of the individual. The time has now come to justify an institution, where the problems involved can be studied, diagnosed and treated with all the resources of modern medicine, biology and psychology.

The Institute intends primarily to help to solve the problems of the average man

and the average woman and to help them to adjust themselves to the various problems that confront them in their sex life. After a general examination, the patients are supplied with a questionnaire, which enables them to answer questions as to their life in general and of their sex life in particular. The details thus elicited facilitate the diagnosis of their specific difficulties.

It is expected that sometimes two young people will undergo such an examination before marriage, to ascertain if they are psychically, as well as physically, well mated. Married people may seek advice which may enable them to avoid the wreckage of their matrimonial venture upon the shoals of some nervous disturbance or some psychic idiosyncrasy.

The patient's confidence will be kept inviolate and his identity will be known only to the physician. The material itself will be correlated and should supply valuable information for studies of sex psychology.

If the individual case requires special examination, the service of specialists will be enlisted. The Institute has on its consulting staff prominent representatives of various medical specialties, particularly an urologist, an endocrinologist, a gynecologist and a psychiatrist. This staff will be increased from time to time as the activities of the Institute are enlarged. After the diagnosis is completed, patients requiring treatment, beyond general advice and instructions, will be sent to the referring doctor or to their family physician, with such advice for treatment as may be needed.

In organizing the Institute and in preparing the questionnaire, the experience of the *Institut für Sexualwissenschaft*, in Berlin, and a similar institute in Stockholm, Sweden, have been utilized, amplified by advice and information volunteered for the purpose by distinguished American sexologists.

JOHANNES HOBING, M.D. Ph.D.

New York City.

ACQUIESCENCE

The "asthenic," the person with mucous colitis, or the one to whom nature has given a "raw deal" can often be made over into a useful and happy member of society if he can be taught the lesson of acquiescence: to stop looking for a cure and instead to settle down to get along as best as he can with his handicap.—WALTER C. ALVAREZ, M.D., in "Nervous Indigestion."

THE · LEISURE · HOUR

A Wonderful Invention

THE greatest practical invention of the times, THE INDIA RUBBER GARAGE, has just been patented: Patent No. 4114441144.

Every one who has ever tried to guide an automobile will immediately perceive the wonderful possibilities of a garage manufactured from rubber. Aside from its unbreakability, which alone is of inestimable value it possesses many advantages, a few of which will be mentioned:

1.—It is rainproof and, in a dry climate, may be reversed and used for a swimming pool, either for the owner or for the car.

2.—Should a friend who owns a car visit you, the garage may be stretched to cover both cars.

3.—There is no danger whatsoever of either injuring the car or the garage when one desires to put the car up for the night. In fact, if one is not on the door side of the garage when attempting to enter, the simple expedient of running with some force against the side wall will cause the garage, owing to its elasticity, to turn inside out and cover the car. It is, therefore, not essential that this garage be furnished with doors.

4.—Being of light weight,, it is easily portable and may be rolled up and tied around the steering wheel, should one desire to take the garage with one on a long trip.

5.—It may then be used in place of a tent, by simply stretching it over to one side, beyond the car, and placing the cot or bed on that side.

6.—In mountain driving, the simple attachment of a few ropes to the hooks, which will be found in the corners of the garage, will enable one to save much gas and trouble, as well as time, by using the garage as a parachute, enabling one thereby to descent from lofty mountains straight

through the air, instead of the long way around the road.

7.—This garage, being a non-conductor of sound and electricity, will have a wonderful effect upon the peace of mind of the community. If you do not care to hear what your neighbors are saying, go in the garage. Further, if you do not care to have the neighbors hear what you are saying, go in the garage. Also, if you desire to hold a personal, heated conversation with your car, telling it exactly what you think of it, this can be done from within the garage, just as soon as you have driven in, without fear or danger of fire, as rubber is a well-known insulator.

8.—The walls may be rolled in a manner similar to that utilized by young ladies with their stockings, thus producing a water-proof container of any desired size, which may be utilized for innumerable purposes, such as making home brew or mixing bread; washing dishes, the dog or even the baby; and it will make an ideal cradle as, owing to its resiliency and elasticity, no harm can come to the child.

9.—If one wishes absolute seclusion, one may pull the garage over oneself, like the mantle of night, and be absolutely safe from intruding friends or enemies; and even the police may be misled, if one will make a noise like a tin Lizzie upon their approach.

10.—This garage should last for years and, even when it has outgrown its usefulness as a garage, may still be utilized for innumerable purposes. It may be made into hot-water bags, rubber bands, erasers, elastic stockings, and the small remaining pieces may be distributed to talkative friends, in order that they may chew on it. In fact, the pieces may even be sold as a substitute for chewing gum.

—ANONYMOUS



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The Medicine-Man

The Indian medicine-man was, primarily, a priest and magician. His chief therapeutic resources were prayers and incantations, though he used some decoctions of barks, roots and herbs.

The picture is from a little-known woodcut, showing a Dakota Indian medicine-man, using his "magic" rattle at the bedside of a sick warrior.

Confessions

To his doctor a man confesses his fears; to his minister, his weaknesses; to his lawyers, his mistakes.—*St. Joseph News-Press*.

Feeling Fine

Two young ladies were motoring north one day last week when they came to a fork in the road and didn't know which branch to take. There was a young man sitting hunched up on a fence beside the road and one called to him, "Suffern?" she asked. The boy looked up. "No," he said, "I'm just sittin' here."—*The New Yorker*.

Unprepared for Disaster

She: "The Doctor says your illness is all due to drink and that you must not take a drop more."

He: "Yes, I didn't know it was such a serious illness. I thought it would just mean an operation."—*Buen Humor, Madrid*.

A Doctor's Prayer

To live, to learn;
And find each close of day,
Myself a little nearer truth,
A little farther on my way.

A little life;
But give me, God, the power
To conquer self and all the doubts
That rise from hour to hour.

And give me strength,
When problems try my soul,
To know the right and do the right.
With honesty my goal.
Nor let me fail
To do the best I can
To overcome earth's greatest curse,
The base ingratitude of man.

—H. EDWIN LEWIS, M.D.

Who's Crazy?

As a farmer was passing the State Insane Asylum, one of the guests of the place poked his head over the fence and called out: "Whatcha got in the wagon, mister?"

"Fertilizer," replied the farmer.

"Whatcha gonna do with it?"

"Put it on my rhubarb."

"Migosh! I put sugar on mine and they call me crazy!"—*Bottling Engineer*.

Pharmaceutical Error

Two druggists were talking about one of their confreres.

"He is a great druggist," said one.

"He is," admitted the other. "But don't you think he makes his chicken salad a little too salt?"—*Hudson Star*.

DIAGNOSTIC · POINTERS

Acute Anterior Poliomyelitis in the Preparalytic Stage

In the spinal fluid of a patient in the preparalytic stage of acute anterior poliomyelitis, an increase in globulin is almost always seen; the average cell count range is usually from 20 to 250. Polynuclears are increased in the early stages; but rapidly give way to a predominance of lymphocytes. By a careful evaluation of the symptoms that are nearly always present, a diagnosis can be made in the preparalytic stage in most cases. The importance of diagnosis in this stage is important, as the proper treatment (convalescent serum) at this stage offers the best possible outlook for the most favorable results.—DR. T. D. JONES, in *Virginia Med. Monthly*, Dec., 1930.

Results of Adenoids

The following conditions may be, in part at least, due to adenoids, and frequently clear up promptly after their removal: Mental backwardness; flat-foot; lateral curvature of the spine; deformity of the maxilla, with crowded, overlapping of prominent teeth; incontinence of urine; deafness; running ears, with perforated ear-drums; and many cases of asthma, minor epilepsy and stammering.—DR. H. MERRALL, in *Practitioner (Lond.)*, Nov., 1930.

Cold Urticaria and Histamine Allergy

It has been suggested that histamine (or a substance like histamine) is responsible for the urticarial wheals sometimes produced by cold.

In J.A.M.A., Feb. 14, 1931, Dr. L. M. Blackford, of Atlanta, Ga., reports a case in which urticarial wheals appeared following prolonged exposure to cold water

and in which the response of the blood pressure to histamine was greater than in a control case.

Sinus Infections

The sinuses play a much more deadly role as causative factors for degenerative disease in the latter decades of life than the tonsils or teeth.—DR. F. A. PLUM, of Honolulu, in *Northwest Med.*, July, 1930.

The Blood Picture of Whooping Cough

The blood picture is seldom an aid in early diagnosis of whooping cough. Initial leukopenia and terminal leukopenia are probably integral parts of the blood picture in pertussis. Leukocytosis and lymphocytosis are usually present when the paroxysmal stage is well established.—DR. L. W. SAUER and L. HAMBRECHT, of Evanston, Ill., in *Am. J. Dis. Child.*, June, 1931.

High Blood Pressure

As a general rule, when the diastolic pressure is found to have a constant reading of 100 mm. Hg, hypertension is present, whether the systolic pressure is 170 or 140, and further investigations should be made. A persistent diastolic pressure of over 90 at ages under 40, or of 95 at ages over 40, will show a high mortality; a diastolic pressure of 100 or more at any age is to be considered as pathologic.—DR. C. N. McCLOUD in *Minnesota Med.*, June, 1930.

Reducing Maternal Mortality

The method of reducing maternal mortality is by eliminating the poor maternity risk. This involves two procedures: the location of the poor risk; and protection from pregnancy until such time as the

woman may be able to undertake it with safety to herself and her child. — DR. LYDIA A. DE VILBISS, Miami, Fla., in *M. J. & Record*, Oct. 15, 1930.

Glutathione and Cancer

Certain experimental work with glutathione, by biochemists of the U. S. Public Health Service, may prove to be of vital interest in connection with the cancer problem. It has been found that at a certain critical stage in the growth of cells—the studies were conducted on the unicellular ameba—this chemical, glutathione, has a powerful and specific effect on the cell nucleus, whose division in turn presumably stimulates the whole cell to divide. That the same thing happens with cells other than the ameba has yet to be demonstrated, but the discovery may have far reaching implications, in view of the large supply of glutathione in cancer cells. —*United States Daily*, Jan. 26, 1931.

Arrhythmia

The great majority of cardiac arrhythmias seen before the age of 12 years are sinus arrhythmias and are of little significance, being simply the exaggeration of a natural phenomenon.—DR. R. T. SCOTT, of Lewiston, Idaho, in *Northwest Med.*, July, 1930.

Chloasma

The origin of chloasma in pregnancy, as that of bronzing, may be explained in two ways: either the adrenal function is disturbed by the ovarian upset, or the splanchnic nerve is injured by the pregnancy. From *Med. Herald, Phys. Therap. & Endoc. Survey*, Sept., 1930.

Children and Freudism

Two fallacies seem to be committed by exponents of the more rigorously Freudian views. To say that infantile sexuality exists is an entirely different assertion from the statement that it lies at the root of all neurotic disorders of children and adults. The other assertion is that infantile sexuality is the same as adult sexuality in its aims and objects. This is a type of assertion that it is hard to disprove, for a negative finding is no proof to the contrary. Careful observation by ordinary methods, in

younger children, fails to furnish, as a rule, evidence of sexuality of this type at the foundation of their functional nervous disturbances; the special methods which have been employed to show it from contemporary studies of children (not from retrospective accounts from adults) do not command confidence as valid scientific evidence. —DR. R. D. GILLESPIE, of London, Eng., in *Brit. M. J.*, Nov. 15, 1930.

Limping and Osteomyelitis

The storm signal of osteomyelitis is a limp severely painful and associated with fever. Its occurrence in the lower extremity is about in the following order of frequency: (1) *tibia*: (a) posterior aspect of internal lower surface; (b) anterior internal aspect of upper end; (2) *femur*: (a) anterior internal aspect of neck; (b) posterior popliteal surface; (3) *fibula*: only very occasionally.

The essential change is a destructive process at the metaphysis adjoining the epiphysis; hence the condition is too often diagnosed as "rheumatism" by the doctor, or as "growing pains" by the parent.—DR. G. A. RAMSAY, in *Canad. M. A. J.*, Oct., 1930.

Sulpharsphenamine in Wassermann-Fast Syphilis

Only 2 out of 32 cases of unquestionably Wassermann-fast syphilis presented a slight change to doubtful following 24 to 32 injections of sulpharsphenamine, over a period of several months.—DR. J. L. GRUND, in *New England J. Med.*, July 10, 1930.

Diagnosis of Tuberculous Meningitis

A reduction of the spinal fluid-sugar below 30 mg. per 100 cc., provided the fluid is clear, is virtually pathognomonic of tuberculous meningitis.—DR. W. S. MIDDLETON, in *Wisconsin M. J.*, Aug., 1930.

Gas Under the Diaphragm

The presence of gas under the diaphragm can mean only one of two things: either there has been a ruptured hollow viscus or air has entered the peritoneal cavity from without.

A case in which such a gas collection

under the diaphragm was clearly shown, on a roentgenogram, disclosed on laparotomy no signs of perforation in the stomach or intestine; the history excluded any evidence of the entrance of air from outside. The explanation offered is that a small perforation had existed from a gastric ulcer, which perforation had spontaneously closed by the development of adhesions.—DRS. E. L. JENKINSON and I. G. ELLIS, of Chicago, in *Am. J. Surg.*, Oct., 1930.

Differentiating Sacro-Iliac from Abdominal Pain

In the examination of a number of patients, it was consistently found that abdominal pain of intra-abdominal origin is not relieved when the patient is turned on one side or the other, but even markedly aggravated. In patients observed with abdominal pain due to bilateral sacro-iliac strain, relief from pain was always obtained on the side on which the patient rested. When patients suffered not only from sacro-iliac strain but also from intra-abdominal conditions there was no relief from pain on change of posture. — DR. A. I. RUBENSTONE, of Philadelphia, in *J.A.M.A.*, Dec. 13, 1930.

Human Placental Hormones

Animal studies suggest that in the human placenta hormones exist which are absent in lower mammalian forms. This suggestion receives support from the observation that pregnancy urine of certain of the lower forms has failed to give an Aschheim-Zondek pregnancy test when injected into immature mice. — DR. J. B. COLLIP, of Montreal, in *Canadian M. A. J.*, Nov., 1930.

Allergy Following Rectal Anesthesia in Labor

In an experience of 868 labor cases, in which rectal administration of the quinine-alcohol-ether combination was used (the 10 grains of the No. 3 formula of Gwathmey's original communication), one patient alone showed an allergic reaction, developing a bright-red rash, which persisted for 5 days. Quinine allergy is rare. — DR. M. P. RUCKER, Richmond, Va., in *Am. J. Surg.*, Oct., 1930.

Neoplasms of the Bowel

The following signs and symptoms suggest the presence of a new growth in some part of the intestinal canal:

- 1.—Irregularity of the bowels.
- 2.—Constipation—especially if it develops suddenly.
- 3.—Constipation alternating with diarrhea.
- 4.—Chronic diarrhea.
- 5.—Ineffectual and unsatisfying evacuation.
- 6.—Blood or mucus or both in the stools.
- 7.—Development of hemorrhoids.
- 8.—Aggravation of existing hemorrhoids.
- 9.—Colic due to gas.
- 10.—Flatulent distention of the abdomen.
- 11.—Increased and noticeable peristalsis.
- 12.—Presence of a "lump." — PROF. GREY TAYLOR, Newcastle-on-Tyne, Eng.

Adenitis of Facial Lymph Gland

A localized swelling of the cheek, about an inch or so from the angle of the mouth, not attached to the integument or the mucous membrane, may be either: A lipoma developing in the sucking pad of an infant (a ball of fat between the masseter and the buccinator muscles); a mixed tumor or a cyst of a molar gland; or adenitis of the facial lymph gland. The latter is very rare. A case of adenitis of the facial lymph gland in a young man of 23 is reported in *Practitioner*, Lond., Nov., 1930, by DR. HAMILTON BAILEY.

Anesthesia in Obstetrics

It is my opinion that the decrease in the obstetric deaths from puerperal sepsis which occurred in the days of septic medicine, is more than counterbalanced by the deaths which occur during the present era of asepsis, due to the increased incidence of operative interference, so that the maternal death rate remains at comparatively the same level that existed fifty years ago.

Operative procedures are often the result of too-profound anesthesia and, if they are not undertaken, the harmful effects of the anesthetic cause fetal accidents.—DR. H. A. FURLONG, Pontiac, Mich., in *J. Mich. St. M. A.*, Aug., 1930.

Current · Medical · Literature

Bismarsen in the Treatment of Syphilis

From a study by Dr. John H. Stokes and his associates, of Philadelphia, given in *Arch. Dermat. and Syphilol.*, Apr., 1931, based on a series of 7,666 injections of Bismarsen in the treatment of 341 cases of syphilis, these authors reach the following conclusions:

Bismuth arsphenamine sulfonate (Bismarsen) is a highly rational, relatively nontoxic and easily administered drug for the treatment of patients with syphilis.

Local reaction to intramuscular injection occurs following 2 percent of injections, as stiffness and moderate pain, most marked on the second or third day. Prolonged massage, in addition to a good technic, and hot applications control all but 8.2 percent of these reactions.

Systemic reactions occur following 0.5 percent of injections, or in 11 percent of patients, and include nitritoid crises, mild gastrointestinal reactions and cutaneous reactions.

The occurrence of aleukemia hemorrhagica, 1 case in at least 11,000 injections reported, is noted.

The incidence of primary exfoliative dermatitis is 1 case in 5,500 injections—about that of neoarsphenamine and less than that of other arsphenamines.

Three cases of jaundice have thus far been reported, and no cerebral accidents.

Spirillicidal and healing action, though slower than that of other arsphenamines, does not apparently militate against an ultimate arresting or "curative" effect in early syphilis, equal and even superior to that of other standard arsphenamines, combined with bismuth or mercury.

Herxheimer effects are comparatively insignificant or absent.

The effect on the Wassermann reaction in early syphilis is excellent and lasting.

In early syphilis, only two of 13 patients reexamined within from two to four years had abnormal spinal fluids (both preparetic types). One of them presented a neuro-recurrence.

The proportion of all forms of relapse was 12 percent in early syphilis, as compared with from 20 to 40 percent in a carefully studied series treated with other drugs and modern systems. More time is required for final judgment, however.

There was a suggestion that cardiovascular syphilis may progress under cover of Bismarsen treatment in early syphilis, as with other drugs and systems.

There is evidence that intermittent is less effective than continuous treatment with this drug, and that a smaller amount, continuously applied, yields fewer relapses of all kinds than a larger amount in courses, with rest periods. Small amounts may "cure" some, while large amounts fail to influence others.

Two injections a week are preferable in early syphilis.

Bismarsen reduces from 40 to 50 percent of resistant positive Wassermann reactions of the blood to negative in various phases of the disease, including Wassermann-fast latency.

Marked tonic effects are secured by treatment with Bismarsen.

In cardiovascular syphilis, Bismarsen secured a good final result in 13 of 22 cases. The cases, however, included little myocardial and no apparent coronary disease. The number showing late improvement, 67 percent (two to three years), is nearly equal to the number showing early improvement (74 percent), an argument against therapeutic paradox.

Cardiovascular symptomatic relief secured by Bismarsen alone is equal to that secured by the drug plus iodide and mercury. The latter seem, therefore, to be unnecessary.

Paradoxical accentuation of an aortic murmur under treatment was observed.

In prenatal syphilis, the action of the drug, while not fully appraised, seems disappointing. Its slowness of action leads the authors not to recommend it in acute interstitial keratitis.

In cutaneous, mucosal and osseous gumma, Bismarsen is slower than other arsphenamines and is not recommended, except as continuation treatment.

About 50 percent of patients with neurosyphilis (nonparetic formulas only) had blood and spinal fluid reduced to normal by mixed forms of standard treatment, preponderantly Bismarsen.

Bismarsen has relatively little influence on the paretic formula in the spinal fluid, and in this respect is no substitute for tryparsamide.

Fair to good symptomatic improvement in meningeal headache and lightning pains can be secured with Bismarsen in most tabetic patients. Symptomatic progression, in spite of treatment, has not occurred in the series thus far. Optic atrophy is reported as not benefited.

It would appear that the field of greatest promise for Bismarsen is that of early syphilis. In this field, the authors commend its use in continuous treatment, without rest intervals, two injections per week, to as near 40 injections as possible. Attention to technical detail, while it need not be excessive, facilitates the use of

the drug in this way. Massage and hot applications are items of importance. The relative simplicity of administration, the comparative rarity of complications, the low proportion of relapse in the most significant phase of the disease, from the standpoint of both the individual and the public health, all seem to point to bismuth arsphenamine sulfonate as a practitioner's advance in the control of syphilis.

Analysis of 100 Cases of Cardiac Pain

The most important chief complaint with which the cardiologist is concerned in private practice is cardiac pain. Practically 25 percent of heart patients visiting the physician's office have this as the primary complaint.

In *Am. J. Med. Sc.*, July, 1931, Drs. L. F. Bishop and L. F. Bishop, Jr., of New York City, have analyzed 401 heart cases occurring in their office practice over a 3-year period; of these, 100 presented cardiac pain as the prominent symptom.

The patients were grouped arbitrarily as follows: hypertensive, arteriosclerotic, rheumatic, syphilitic, thyroid, angina pectoris, obesity and effort syndrome.

The study showed that exertion appeared most frequently as an exciting cause of pain in all groups.

The hypertensive group showed the highest mortality (41 percent of the group), with about half this number improved. The arteriosclerotic group showed the least mortality (10 percent of the group), but with a very high percentage of improvement. The coronary disease showed 36 percent group mortality and 36 percent group improvement. The angina pectoris group mortality was 15 percent, but three times as many were improved.

Perennial Pollen Desensitization

After desensitizing a hay-fever patient with pollen extract, why not keep him desensitized? This can be done by giving pollen extract every few weeks throughout the year.

This method of perennial pollen desensitization is described by Dr. W. T. Vaughan, of Richmond, Va., in *J.A.M.A.*, July 11, 1931, and he makes a comparison of the results obtained by it with those from coseasonal and preseasonal treatment.

By the perennial method, excellent results (90 to 100 percent) were obtained in 95.2 percent of 21 cases; with the coseasonal method, excellent results in 40 percent of 15 cases; and by the preseasonal in 38.1 percent of 21 cases. Perennial treatment so far excels either of the other two methods, in the relief attained, that it required no persuasion to have most of the members of all three groups continue the following year with the perennial treatment.

After termination of the season, the dose is 0.1 cc. of a 1:50 solution, and injections are given at intervals of two, three or four weeks throughout the year. Two or three months before the next season, each dose is increased 0.1 cc. so that at the beginning of pollination the

maximum desired dose is reached. The small size of the dose (0.1 cc.) makes the injection practically painless.

The author states that the advantages of the perennial method appear to be:

1.—Intensive preseasonal treatment is avoided.

2.—The patient's general health throughout the year appears to be better, at least in certain cases.

3.—There appears to be a decreased tendency toward unfavorable reactions.

4.—Treatment may be started at any time of the year. There is more available time to accomplish complete desensitization in the rare extremely sensitive case requiring minute increases each time.

5.—There is some evidence to show that if perennial desensitization is continued long enough an actual permanent cure may be effected.

Agranulocytosis

The following comments are made by Drs. S. R. Roberts and R. R. Kracke, of Atlanta, Ga., in *Ann. Intern. Med.*, July, 1931, illustrating the granulopenic trend from 8,000 private clinic blood counts:

1.—The importance of leucopenia is emphasized.

2.—The biologic and diagnostic importance of a leucopenia is probably as great as that of leucocytosis.

3.—Two conditions, acute and chronic granulopenia, are described.

4.—Agranulosis is classified in the general group of the granulopenias.

5.—The relation of acute and chronic granulopenia to agranulosis is discussed.

6.—The problem of granulopenia is studied in 8,000 private clinic patients.

7.—One out of every four patients may be expected to have a mild granulopenia.

8.—One out of two female patients between the ages of forty and sixty may be expected to show a mild granulopenia.

9.—The complaints of weakness, exhaustion or fatigue are twice as frequent in the granulopenic patients as in those with normal white-cell counts.

10.—White-cell counts done today show no difference from those done ten years ago.

11.—A clinical syndrome, consisting mainly of weakness, easy exhaustion, tendency to fatigue, loss of strength and inertia, associated with a diminished number of granulocytes, is described.

12.—The severity of the symptoms is largely dependent upon the degree of diminution of the granulocytes, with complete collapse in the most severe type, namely, agranulosis.

The Diagnosis and Treatment of Goiter

According to Dr. A. S. Jackson, in *Illinois M. J.*, Feb., 1931, the promiscuous use of iodine has served to increase the mortality rate in the operative treatment of exophthalmic goiter in recent years more than any other one factor. Some patients have been kept on iodine

6, 12 and even 24 months. There is, at first, a decided though deceiving improvement, but in from 3 to 6 months later the heart is often decompensated, ascites may develop, hypertension follows and the risk of operation is increased tremendously.

If in doubt as to the diagnosis in any case, a therapeutic test of iodine may be given for a week, preferably after taking a metabolic test. This should be sufficient, for if the patient really has an exophthalmic goiter there will be a considerable improvement, accompanied by a fall in the metabolic rate. If the iodine is stopped and the symptoms again return, together with a rise in the rate, the diagnosis should be settled, and the patient given a period of preparation, not to exceed two weeks, and then operated upon.

Results of Tonsillectomy and Adenoidotomy

The results of an intensive study of the results following tonsillectomy and adenoidotomy in a small group (130) of children are tabulated and discussed in detail by Drs. T. K. Selkirk and A. G. Mitchell, of Cincinnati, in *Am. J. Dis. Child.*, July, 1931.

In general, this study shows that three years after tonsillectomy and adenoidotomy there was a lessened incidence of colds, nasal obstruction and sore throat; while sinus infection, headache and "growing pains" were increased in frequency in the operated group, as compared with controls.

Then authors point out that a great many factors other than the operation itself should be taken into account when evaluating the results of it. These are mainly: Age, sex, race, heredity, financial class, season, length of observation, etc.

A Comparison of Viosterol and Cod Liver Oil

There is a growing belief among pediatricians and physicians that viosterol is a concentrated substitute for cod-liver oil.

In *Am. J. Dis. Child.*, July, 1931, E. O. Prather, Martha Nelson and A. R. Bliss, of Memphis, Tenn., reached these conclusions, following comparison of results from the use of viosterol and cod-liver oil in animals:

1.—When animals are fed a purified diet adequate in proteins, inorganic salts, calories and vitamin B, they grow well for a short time; then the weight becomes stationary or decreases rapidly, and xerophthalmia develops. The upper respiratory tract becomes inflamed; the liver and spleen become discolored, shrunken and infiltrated with fat; the kidneys become sand-colored, and the intestines are found to be thin-walled and filled with gas. In some cases, the stomach, as well as the entire intestinal tract, is badly distended. No visible intraperitoneal fat is present. The intestines vary in color from dull brown to a degree of inflammation that is almost red. The amount of calcium deposited in the bones is very small.

2.—The addition of viosterol to a diet like the afore-mentioned one increases the calcification of the bones, but it does not prevent or cure

the xerophthalmia nor increase the growth of the animal. Instead, the xerophthalmia appears to be aggravated, though it does not develop earlier. The condition of the upper respiratory tract is not improved; the condition of the intestines, kidneys, spleen and liver is found to be fully as bad, if not worse, than that found when viosterol is not given.

3.—The addition of cod-liver oil to the aforementioned diet results in excellent growth of the animals, a better calcification of the bones, an increased deposition of body fat and normal respiratory tracts, and the liver, kidneys, spleen and intestines are found to be normal.

4.—Viosterol, therefore, does not demonstrate the power to stimulate growth and development of the body and vital organs, nor to prevent infections of the upper respiratory tract nor to produce the same degree of calcification and growth of the bones as does cod-liver oil.

5.—Since "colds," malnutrition and intestinal inadequacies are more frequent in children than rickets, this study emphatically suggests that the apparently widespread substitution of viosterol for cod-liver oil, in the diet of the child, is not logical and may result in an appreciable decrease of the child's strength and resistance to infections.

Copper and Iron in Immunity

An editorial in *J.A.M.A.*, Aug. 22, 1931, indicates that copper and iron are extremely important in toxin production. Recent investigations are referred to which showed that the production of diphtheria toxin in proteose broth could be inhibited by diminishing the available copper or increasing the available iron.

The experimental work already done suggests a possible therapeutic application. Perhaps the ratio of copper to iron in the blood could be changed in the presence of bacteria giving off toxins. If the copper ion could be increased in the blood, in the presence of the hemotoxins of the pneumococcus and streptococcus, toxin production might be inhibited.

The investigation made seems to be a further step in the understanding of the composition of toxins.

Heart Disease, Prevention and After Care

While it is true that the majority of deaths from heart disease occur after the age of 50 years, yet heart disease is just as important in the early years of life as are many of the common children's diseases:

In *Illinois M. J.*, Sept., 1931, Dr. I. C. Riggien, of New York, remarks that, in the elderly, heart defects are usually associated with degenerative diseases and approximately 40 percent of all heart cases are of this type. In 10 percent the etiologic factor is syphilis.

Statistics supplied by the American Heart Association show that approximately 7 out of every 1,000 school children have some heart defect, mostly due to some form of rheumatic infection. It has been estimated that 25 percent of all heart disease is due to rheumatic infection, the very great part of which occurs in children. It is believed that the most frequent

portal of entry of the infection (the cause of the heart disease) is through the tonsils.

Observation of children who show rheumatic manifestations other than in the heart, shows that at the end of a few years 25 percent had developed a cardiac lesion and it is considered that the other 75 percent will at some later time develop heart symptoms.

Rheumatic heart disease in its active stages manifests itself as carditis.

Particular points that should be observed in the care of the child known to have a heart impairment are:

1.—The child should be carefully examined by a competent physician to ascertain if the condition is acute or chronic, and if active or quiet.

2.—For those with an active heart condition, complete rest in bed, under the constant supervision of a physician, is essential.

3.—In the quiescent, of which there are a far greater number, it is most important that proper rest, fresh air and food be provided.

4.—All defects, such as diseased tonsils and infected teeth, should be corrected at once.

5.—The proper kind of clothing should be provided to guard against wet feet and chilling of the body. Too much clothing as well as too little, often results in chilling.

6.—Proper vocational guidance is most important, in order that the child may be trained for a desirable occupation, as well as one within his physical capacity. The physician's advice in this regard is absolutely necessary.

In considering after-care of persons suffering from cardiac disease, it must be understood that each cardiac case presents its individual problems. The average individual has mistaken ideas about heart disease and one of the first things to be considered in dealing with the cardiac patient is to overcome the fear of sudden death. We know that sudden death is an uncommon occurrence among heart sufferers. If we review our experiences with cardiac cases, it will be found that there are usually months, and often years, of gradually increasing invalidism before death. This fear of sudden death must be overcome before there can be any great improvement in the physical condition of the patient. We must emphasize the fact that all heart disease is not fatal, though it is more or less incapacitating.

Bismuth Campho-Carboxylate (Bismo-Cymol) for Syphilis

Bismo-Cymol is a basic bismuth derivative of campho-carboxylic acid, in olive oil solution. The therapeutic dose of 2 cc. contains 100 mgm. of metallic bismuth.

In *Am. J. Syphilis*, April, 1931, Dr. J. A. Kolmer shows that the toxicity of Bismo-Cymol is almost nil. Microscopic examination of the kidneys, liver, suprarenal glands, spleen, heart and brain of guinea pigs and rabbits which have received from 10 to 20 intramuscular injections of 0.0015 Gm. of Bismo-Cymol per kilo showed but slight or no demonstrable changes.

Bismo-Cymol exhibits no trypanocidal action in doses up to 0.1 Gm. per kilo. In rabbits inoculated intratesticularly with the Nichols-Hough strain of *Treponema pallida* and treated with Bismo-Cymol 3 to 4 weeks later, when they

presented acute orchitis with numerous spirochetes, the organisms disappeared from the lesions within 5 days after the intramuscular injection of 5 to 10 mgm. per kilo.

Bismo-Cymol is absorbed more rapidly than the insoluble salt, potassium-bismuth tartrate.

Clinically, Bismo-Cymol has proved very effective in penile chancres and in cases of secondary syphilis, and was of particular value in congenital syphilis of children.

The author in closing remarks: "Judging from the gradual disappearance of demonstrable tertiary lesions and the serologic results, I believe that Bismo-Cymol possesses distinct therapeutic effectiveness and that its remarkable freedom from pain and local reactions, combined with a very high degree of toleration and slower absorption than aqueous solutions of bismuth, render it a compound of distinct usefulness in the treatment of chronic syphilis."

The Lead Treatment of Cancer

The possibilities of the chemotherapy of cancer with colloidal lead received a check, owing to the toxic effects of this agent in human cases.

In *Practitioner*, August, 1931, Dr. W. Blair Bell, of Liverpool, Eng., states that research along this line is still being pursued and with greater prospects of ultimate success. An organic lead preparation, H126, (benzenesulphonylglycinate) has been prepared and has given most dramatic results when injected intravenously into animals with widespread cancer metastases. On account of its great toxicity, however, it cannot be used in the human subject.

In the Koch Institute, Berlin, Dr. Collier, according to the author, states that they are convinced, following extensive experimentation, that in lead we have the only known element that specifically affects cancer, apart from radiation. They have also succeeded in preparing a water-soluble, diffusible, organic compound in which the lead is not ionized and which remains unaltered, as proved chemically in the tissues when injected locally, and is slowly taken up in this state, without any toxic but with a curative effect on the malignant neoplasms of rabbits, in 80 percent of all cases.

So far as human cases have been treated with this compound, no toxic symptoms have been seen and the investigators are satisfied with the results. A sample of this compound has been tested by Dr. Bell and he has been able to confirm many of the claims made for it; the other claims are still being investigated.

Carotene and Vitamin A

The yellow pigment carotene is apparently the plant source of the vitamin A of animal tissue. According to an editorial in *J.A.M.A.*, July 18, 1931, the suspicion of such a relationship, which was ventured by Steenbock and others several years ago, seems, after a period of uncertainty and even denial, to be no longer questionable.

The best information at present indicates that carotene and vitamin A are not identical, but rather that the pigment functions in the animal body as a precursor of the familiar

vitamin. This would harmonize the observation that the intensely yellow pigment is synthesized in plants, while its colorless derivative is stored in animal tissues. This will explain the vitamin potency of yellow vegetables, on the one hand, and liver oils—for example, cod-liver oil—on the other, despite the marked color differences between them.

Reduction Diets

It is extremely unfortunate that the average physician devotes so little time to the study of dietetics. Obese patients would consult their physicians more regularly and be less inclined to practice reducing without medical supervision if they were given more specific directions. But the usual result of a consultation for control of weight is discouraging. As a rule, it consists of certain admonitions, in very general terms, and a list of foods. The result is total failure to accomplish anything.

A reduction diet requires the same attention to quantitative consideration as a diet for diabetes. The output of energy must be calculated as closely as possible and the intake made to provide something less than this. Reduction at a rate faster than 2 pounds (0.9 Kg.) a week is often disadvantageous. If the weight loss is too rapid, the patient loses strength, his skin does not have time to contract, and the haggard appearance which develops so frightens his friends and family that the program is interrupted. More gradual reduction avoids this and has the additional advantage that new food habits are formed and the lower body weight can then be maintained without conscious effort. The diet, however, must be as carefully planned as for a person with diabetes, the actual calories rigidly controlled, and strict attention paid to the vitamin and mineral carriers and the protein.

—DR. R. M. WILDER, of Chicago, in *J.A.M.A.*, Aug. 15, 1931.

Hemostasis in Suction Tonsillectomy

Dr. J. B. H. Waring, of Cincinnati, in *Western J. Surg. Obstet. and Gynec.*, July, 1931, outlines the following plan of hemostasis in suction tonsillectomy:

Under general anesthesia, as the tonsil is enucleated, the fossa is filled with an oversize cotton sponge, on forceps and held firmly under pressure for perhaps a minute. Meantime the pharynx is kept clear by use of the aspiration tip connected to an air pump. This tampon is removed and, if there is still any bleeding, a fresh tampon is placed. Usually the fossa is perfectly dry by this time. Using a tonsiloscopic tongue depressor (combined pillar retractor and tongue depressor in one instrument), the fossa is closely examined from top to bottom, not only for completeness of the enucleation, but to locate any possible bleeding point. If an oozing point is located, a smaller sponge is placed over the spot, quickly withdrawn, and the tissue clamped for a half-minute or so, with a Herbert tonsil hemostat. This is a remarkably efficient instrument. It is not often that an oozing point is located, and still less common to locate a second; but the combination use of the tonsiloscopic tongue depressor in one hand and the

Herbert hemostat in the other makes fossa hemostasis a much easier and simpler affair than usual, and this without intervention of the hands of an assistant or nurse in a none-too-large field to begin with.

In the still rarer event that a spurter is observed, it is handled in the same way. Hemostatic application is not required very often; but it is very essential that the first fossa be left perfectly dry before removal of the second tonsil is begun; and that both fossae be clean and dry before the patient is allowed to come out of the anesthetic very much, or is removed from the operating room.

Secondary hemorrhage after suction tonsillectomy is a comparatively rare occurrence in my experience; and if the patient leaves the table with dry fossae, little subsequent trouble need be anticipated on the score of bleeding.

A Study of 500 Blood Transfusions

In *Am. J. Obstet. & Gynec.*, Aug. 1931, Dr. W. K. Burwell presents a study of a series of 500 consecutive blood transfusions, given to 382 patients in the Woman's Hospital in the State of New York.

In typing, the classification and hanging-drop method of Moss was used. The amount of blood transfused was, usually, 500 cc.

In the 500 transfusions there were 270 without any reaction whatever; single reactions occurred in 137 patients. The most important of all reactions are the intratransfusional reactions, which are the danger signals and signs of incompatibility.

Transfusions may be repeated with safety. When repeated it is of the utmost importance to use fresh serum from the already transfused patient for purposes of cross matching with the succeeding donors' cells.

Glucose infusions are of great value while waiting for consciousness to return or until a donor is obtained, and are more useful than blood transfusions in cases of shock where hemorrhage has not been a factor.

Thrombophlebitis occurred in 1 percent of the cases; but it is doubtful whether or not transfusion played any part in its development.

One (1) death occurred in this series which, it is believed, was the direct result of the transfusion; the author thinks it might have been avoided if the operator had interrupted the transfusion when the first signs of incompatibility appeared.

Postoperative Complications of Abdominal Operations

Too much emphasis has been placed on the surgical operation and too little on the preoperative and postoperative care. In surgery, prevention of complications is the best treatment.

In *J. Indiana S. M. Assn.*, Aug. 1931, Dr. C. A. Nafe, of Indianapolis, discusses various postoperative complications.

Regarding wound healing, proper skin-edge apposition and correct suturing are as important as any part of the operation. An interrupted mattress-on-edge-suture, using a dermal suture material, is preferred.

It seems to the author that failure to suture properly the posterior sheath of the rectus muscle and bring together the split belly of the rectus muscle, in incisions through it, is a predisposing cause of wound separation.

Operations upon the stomach, more than any other operation, seem to be followed by post-operative hemorrhage. In dealing with this class of patients, extreme care must be taken to see that they are properly prepared by the use of calcium lactate to decrease the bleeding time, and extreme caution at operation must be exercised in seeing that all bleeding vessels are properly ligated.

Measures that may prevent a certain amount of acute gastric dilatation are: Avoiding vigorous preoperative catharsis; careful preparation of the stomach by small feedings the day previous to operation; the use of anesthetics other than deep ether narcosis. The most valuable treatment of this condition, when once it exists, is frequent gastric lavage.

The author thinks that the old precept of "when in doubt, drain" should be changed to "when in doubt, don't drain".

In cases of ileus, where peristalsis of the upper bowel is still present, and in late mechanical obstruction, a jejunostomy is a life-saving procedure.

The use of carbon dioxide and oxygen at the end of an operation, especially abdominal, to increase the respiratory movements and keep the patient in a condition of deep breathing for 3 to 5 minutes, is probably the best agent to prevent atelectasis and should be used more freely.

New Instruments for Living Sutures

In plastic surgery of bone and fibrous tissue, depending on transplantation, the viability of the transplant depends on the formation of fibrous connective tissue between the transplanted and host tissues. This is greatly facilitated by the use of living sutures of fibrous tissue, but the technic of using such sutures has been difficult and unsatisfactory.

In *Am. J. Surg.*, July, 1931, Dr. C. M. Gratz, of New York, describes a new needle, with rectangular cross section and a special eye, which has overcome most of the difficulties. The details of another type of needle for living sutures, which is really a suture threader, are also given.

According to the author, these new instruments are a great advance over older types.

Closure of the Tight Abdomen

When the peritoneum and transversalis fascia are friable and a lock-stitch will not hold, Dr. C. J. Baumgartner, of Los Angeles, in *Western J. Surg. Obstet. and Gynec.*, July, 1931, states that he has found a simple figure-of-eight suture quite helpful. It uses the comparatively durable rectus fascia as a fulcrum to approximate and hold the peritoneal layer securely, without tearing; it may be placed as an interrupted suture or continuously with the peritoneal closure.

The first bite is placed in the rectus fascia on the side opposite the surgeon. The needle enters well laterally, taking in at least an inch or more of fascia. It is then carried obliquely down to-

ward the incision, taking in a small amount of muscle. A relatively small bite of peritoneum is then taken on the opposite side and again on the side of fascial entry. The needle is then again carried across and obliquely out through muscle and fascia on the side of the surgeon. When this is made taut the primary pull is on the wide bite of fascia and, as it is forcefully brought together, the small portion of peritoneum approximates nicely without tearing.

Irradiated Milk as a Antirachitic Agent

Although, as pointed out by Dr. A. F. Hess and associates in *J.A.M.A.*, Aug. 8, 1931, there are several effective antirachitic agents available for infants, they require the cooperation and goodwill of the mother, besides the fact they are expensive.

From experiments carried out by the authors during the past winter, including clinical therapeutic tests on 102 rachitic infants, they found that cow's milk was rendered highly antirachitic by means of supplementing the fodder with irradiated ergosterol (viosterol) or with irradiated yeast.

These milks of various potencies were given to a large series (102) of young infants during the winter. By this means rickets was prevented, except in its minor manifestations; roentgenologic rickets did not develop. In cases in which rickets was already present, the milk brought about calcification within a month.

From the point of view of the number of antirachitic rat units fed to the cow, the irradiated yeast induced a more potent milk than the viosterol. This distinction was evident, both by biologic assay on rats and by clinical tests of a preventive and curative nature.

The outstanding advantage of this method of antirachitic therapy is that it functions automatically; the specific factor is incorporated in the diet of the infant, relieving the physician of dependence on the cooperation of the mother.

Intradermal Vaccination Against Typhoid Fever

As reported by Dr. L. Tuft, in *J. Lab. & Clin. Med.*, Mar., 1931, it was shown experimentally that the immunologic response following intradermal injections of small doses of triple typhoid vaccine was equal to that produced by larger doses given subcutaneously or intramuscularly.

More than 100 individuals were routinely injected by this method; namely, the administration, at 5- to 7-day intervals, of four doses of a freshly-prepared triple typhoid vaccine, containing one billion typhoid organisms of known antigenic potency and 500 million each of paratyphoid A and B, given by intradermal injection into the upper arm, the first dose being 0.05 cc., the second 0.1 cc., the third 0.15 cc. and the fourth 0.2 cc.

In 87 percent of the patients, followed serologically for periods up to a year, the degree of immunity was equal to that produced by other methods. The value of the procedure lies in the small dosage and the ease of performance. There is but very slight reaction.

Ocular Discomfort and its Relief

Conditions of ocular discomfort which have not responded to the correction of refractive errors are encountered frequently. The causes may reside in either accommodative or convergence weakness or deficiency, or in a combination of both.

Data should be obtained regarding the relative amplitudes of accommodation and convergence at distant (6 meters) and close (33 cm.) points of fixation, as an integral part of every routine refraction.

The imbalances of the extra-ocular muscles discovered by dissociation tests, do not constitute, in and of themselves, sufficient basis for the prescription of prisms.

Data regarding the liabilities and reserves of accommodation and convergence can be obtained readily for far and near points of fixation. Deviations from the standard conditions may be determined and serve as guides in the prescription of prisms, the giving of muscular exercises or a combination of both.

Prisms, base in, are frequently needed, since weakness of convergence is not common. Prisms, base out, are rarely of any value and should be used ordinarily only as temporary alleviators.

The Liver and Vitamin A

Carotene, the normal coloring matter of many vegetable foods, is converted into vitamin A in the animal organism. The colorless yet potent cod liver oil derives its vitamin A indirectly from carotene-containing minute organisms consumed by the fish. From recent investigations it appears probable that the conversion of carotene to vitamin A takes place in the liver.—Editorial in *J.A.M.A.*, July 4, 1931.

Complement Fixation in the Diagnosis of Amebiasis

Investigations in the Walter Reed Hospital, by Col. C. F. Craig, M.C., United States Army, with a view to apply the principle of complement fixation to the diagnosis of amebiasis, have led to the following conclusions, as given in *Ann. Intern. Med.*, Aug. 1931:

1.—There occur in the blood serum of individuals infected with *Endameba histolytica*, specific substances which can be demonstrated by complement fixation when alcoholic extracts of cultures of this parasite are employed as antigens.

2.—These complement-fixing bodies disappear from the blood serum after treatment resulting in the disappearance of *Endameba histolytica* from the feces of the infected individuals.

3.—Individuals free from infection with *E. histolytica* very rarely give a positive reaction, and, in the very small percentage of cases in which infection with this parasite could not be demonstrated, it is probable that the failure to demonstrate it was due to an insufficient number of examinations of the feces.

4.—Individuals infested with *Endameba coli*, *Endameba nana*, *Iodameba williamsi*, *Chilomastix mesnili*, *Trichomonas hominis* or *Giardia intestinalis*, do not give a positive reaction with the complement fixation test.

5.—With the exception of rare cases of syphilis, the complement fixation test for amebiasis does not occur in individuals suffering from other infestations or diseases.

6.—Positive complement fixation reactions occur in individuals suffering from symptoms of infection with *E. histolytica*, and also in those in whom symptoms are absent—the so-called "healthy carrier" of the parasites. It has been noted that, when symptoms are very acute, the complement fixation reaction is sometimes absent or weak.

Acute Gonococcal Epididymitis

Clinical study and a review of the literature of acute gonococcal epididymitis led Dr. C. H. Garvin, of Cleveland, to the following conclusions, as given in *Am. J. Surg.*, June, 1931:

1.—Gonococcal epididymitis is the most frequent disease of the testicle and the most prominent cause of male sterility.

2.—Chemical irritation, instrumental trauma and sexual excitement, with an overdistended bladder, in the presence of either an active or latent gonococcal infection, are the most common causes of epididymitis.

3.—Epididymitis is the result of a mechanical transference of gonococci-laden pus from the posterior urethra and seminal vesicles down the vas to the epididymis. It is peritubular extension and not intratubular, involving principally the globus minor and the other portions of the epididymis by periepididymal extension. It is true epididymitis and not an epididymo-orchitis.

4.—Prevention may be achieved by rest, physical and sexual; gentle and skillfully applied urethral medication in the presence of gonococci; and gentle prostatic and vesicular massage and instrumentation in latent infections.

5.—Our clinical experience leads us to believe that, in the vast majority of cases, conservative treatment—rest, scrotal splinting, intramuscular injections of non-specific proteins—will yield good results, many cases remaining ambulant. Operative treatment is indicated in the fulminating cases not yielding to conservative treatment, in recurrent cases and in cases not resolving.

6.—Thorough eradication of all foci of infection in the posterior urethra, prostate and vesicles is necessary, regardless of the type of treatment employed.

Treatment of Burns

A severely burned patient requires constant care and attention. The treatment instituted must be adjusted from time to time to meet the conditions which arise. The dangers of the disease must be kept in mind, and prevented if possible from producing damage.

The management of these troublesome cases will not be successful if one routine treatment is followed entirely. They should be given the advantage of the good points of many of the more modern improved ideas. Tannic acid treatment is essential to combat the toxemia, and it is often sufficient to carry through the entire period of convalescence of the patient; but where it is not successful, paraffin should be used for the wounds during the healing process, because it protects the efforts of nature in covering this

raw area with epithelium better than any other method we know at this time. However, the paraffined wound must be constantly watched for infection.

We have a variety of therapeutic procedures from which to select and among them we can find one specifically indicated to overcome almost every obstacle that arises in the severely burned cases. — DR. D. V. TRUEBLOOD, in *Western J. of Surg. Gyn. and Obst.*, July, 1931.

Perineal Repairs

Dr. W. F. Kelly, of Indianapolis, in *Med. Arts*, May, 1931, recommends that, in all cases in which a tear is likely to occur, an episiotomy should be done; its advantages are unquestioned by obstetricians and it is done routinely by many in nearly every primipara.

When a perineal tear has occurred, the first step is to make a thorough examination of the damage done, with the removal of all loose and damaged tissue. Repair should begin at the posterior end of the tear and a suture of No. 2 chronic gut put in and tied. This suture should not go through the rectal wall, but through the submucous tissue, turning in the severed edges of the mucous membrane. It is then carried down continuously to the sphincter and where, after bringing the fibers of this muscle together, it is tied externally. After this line of suture is put in, the repair is completed as in any second degree laceration. In this the suture is first carried through the skin and fascia to the left, just below the mucocutaneous junction of the vaginal orifice, a clamp put upon it, then it is brought to the bottom of the incision, the muscle fibers are brought together with several over-and-over sutures, being careful not to use enough traction in the first two sutures to pull on the skin.

The posterior fascia of the muscle is next brought together, starting at the bottom angle, and then the mucous membrane of the vagina is approximated with No. 1 plain catgut. Finally, the anterior fascia of the muscle is brought together, bringing the needle through the skin at the bottom, sewing up and tying the end to the end of the suture just below the mucosubcutaneous junction.

Incipient Parkinsonism

In *Arch. Neurol. & Psychiat.*, Aug. 1931, Dr. S. B. Hadden, of Philadelphia, based on a year's study in the Philadelphia General Hospital, gives the following signs as indicative of incipient Parkinsonism. They are, he says, present in the very earliest cases:

1.—When the patient is made quickly and lightly to close and open the eyes as rapidly as possible and to do it without interruption, one notes that soon the movements of the lids become fluttery. They are not completely closed nor completely opened and the effort usually ends by the accessory muscles coming into play or by the fluttering of the eyelids.

2.—The patient is instructed to open the

mouth widely and to put the tip of the tongue behind the upper front teeth and then rapidly to move the tongue in and out, scraping the tip on the upper teeth. At the onset this movement is usually slower than normal, and soon the tip of the tongue cannot be made to scrape on the teeth, and the tongue is just moved in and out of the mouth, the rate of movement and the amplitude decreasing rapidly until there is merely a sluggish ineffective movement of the tongue within the mouth.

3.—The patient is instructed to close the mouth firmly and with the upper and lower jaws approximated to smack the lips rapidly, and indefinitely to repeat the smacking. Usually after a few smacks the smacking becomes inaudible and the lips are no longer approximated and pulled apart forcefully or quickly enough to cause sound.

Intravenous Vaccination with Hemolytic Streptococci

Rheumatic fever in children is characterized by an increasing susceptibility to recurrence of manifestations up to the age of 12 years; after this age the susceptibility decreases. On the assumption that the increased susceptibility is due to a hypersensitive state, it would seem reasonable to induce a state of hyposensitiveness during the period of increasing susceptibility, by injections of hemolytic streptococcal vaccine.

In *Am. J. Dis. Child.*, July 1931, Drs. May G. Wilson and Homer F. Swift, of New York, give the results of an investigation covering a four-year period of observation (1927-1930). A total of 172 children, selected on the basis of duration of rheumatic disease, the age of the child and the period of last activity, were chosen for this observation, the majority being under the age of 10 years. Approximately half the number received intravenous vaccination, the remainder forming a control series.

The incidence of recurrence and manifestations of activity in both groups were comparable during the two years 1927 and 1928, before vaccination was given.

The yearly incidence of recurrence in the treated group was less than in the control group during the two years 1929 and 1930, after treatment.

Forty-five (45) percent of the treated children, as compared with 18 percent of the controls, were free from recurrence for periods of from sixteen months to two years after treatment.

The causal relation of intravenous vaccination with hemolytic streptococcal vaccine to the diminished incidence of recurrence observed is discussed.

The vaccine used consisted of a heat-killed culture of hemolytic streptococcus, suspended in 0.5 percent phenolized physiologic salt solution, so that 1 cc. represented the required dose. The first injection consisted of 250,000 microorganisms and each subsequent weekly injection contained double that of the preceding one until the maximum of 10,000,000 was reached, and this dose was repeated until a total of from nine to twelve treatments had been given.

NEW · BOOKS

All increase of knowledge is the adding of one to one—the unfamiliar to the familiar; the new to the old.—ERNEST WOOD.

Sherman & Smith: The Vitamins

THE VITAMINS. By H. C. Sherman, Mitchell Professor of Chemistry, Columbia University, and S. L. Smith, Senior Chemist, Office of Experiment Stations, United States Department of Agriculture. Second Edition. American Chemical Society Monograph Series. New York: The Chemical Catalog Company, Inc., Book Department. 1931. Price \$6.00.

This is one of the scientific monograph series published under the auspices of the American Chemical Society. The general object of these monographs is to coordinate the knowledge available on definite chemical subjects. Men are selected to write, who have spent years in the study of important subjects and who are willing to coordinate their knowledge and present it in concise, readable form, so as to be available to other chemists and make them conversant with the progress in that subject.

The authors of the present volume, now in its second edition, who are well known as authorities on matters pertaining to the chemistry of the vitamins, give here a very complete annotated collected review of the literature. There are 7 chapters, each one devoted to a distinct vitamin. The bibliography of references, which has been carefully selected from the voluminous literature, occupies nearly 200 pages and is one of the valuable features of the work.

Although this book is mainly concerned with the chemical aspects of the vitamins (the exact chemical formula of none is yet known, nor can any be synthesized), nevertheless, the subject is of very great importance to every physician, especially to the pediatricians, as these food supplements are directly associated with nutrition and metabolism, and their absence or deficiency, like that of the endocrines, is responsible for a host of diseases.

The text is concise and readable: there are no chemical formulas nor any chemical technicalities which cannot be easily understood by any medical reader. Moreover, the work is authoritative and up to date.

Bray: Recent Advances in Allergy

RECENT ADVANCES IN ALLERGY. By George W. Bray, M.B., Ch.M., London, England; Asthma Research Scholar, The Hospital for Sick Children. Philadelphia: P. Blakiston's Son & Co., Inc. 1931. Price \$3.50.

Coming as it does, a few weeks after the appearance of the third excellent American Volume on hayfever and asthma in 1931, this book

will necessarily be criticized by the standards set up by the recent and semi-recent American monographs on the same subject. Doctor Bray gives full credit to American preeminence in this field, but does not try to account for it. The answer is very simple—ragweed. The outstanding clinical and field work on hayfever has been the stimulus in America, which is almost entirely lacking in Great Britain, where ragweed hayfever does not exist.

The book does not pretend to tell how to treat hayfever in the United States. In place of American botanical data, there is a good chapter on the hayfever flora of the British Isles, with notes on Australia, New Zealand and South Africa. Doctor Bray certainly knows the asthma literature and sums it up in a most interesting and scholarly way, adding the salt of his own experience.

O. C. D.

Everyday Practice Series Sneed: Orthopedics in Childhood

ORTHOPEDICS IN CHILDHOOD. By William L. Sneed, M.D., Attending Surgeon, Hospital For the Relief of the Ruptured and Cripples; Fifth Avenue Hospital; Consulting Surgeon, French Hospital; Nassau County and North Shore Community Hospitals; Instructor, Applied Anatomy Cornell Medical College. Everyday Practice Series, Edited by Harlow Brooks, M.D. 145 Illustrations. Philadelphia and London: J. B. Lippincott Company. 1931. Price \$5.00.

In CLINICAL MEDICINE AND SURGERY of June, 1931, we called attention to the beautifully bound and practical set of monographs forming the Everyday Practice Series. They are original presentations of the subjects covered, written by experienced clinicians, embodying the most practical treatments within the scope of general practitioners. Seven of the monographs comprised in the series were then reviewed.

The eighth volume, by Dr. Sneed, on orthopedics in childhood, is quite up to the high standard of the other monographs. In it are stressed the simplest methods of treatment, such as are within the scope of the pediatrician and general practitioner or even which nurses and intelligent mothers can carry out. The needs and opportunities for orthopedic practices other than surgical are not sufficiently emphasized in the medical training of those physicians, most in the confidence of parents, who come first into contact with the deformities of children. To such methods Dr. Sneed pays particular attention, especially to the routine measures carried

out at the Hospital for Ruptured and Crippled, New York.

There are 15 chapters, which cover all the usual deformities of the limbs and spine. Chapter XIV very fully discusses physical therapy measures in relation to orthopedics.

The volume supplies succinctly all that should be known on the subject by the general practitioner and pediatrician and should prove of special value to them and to all associated in any way with the care of children.

Epitome of the U. S. Pharmacopeia and National Formulary

EPITOME OF THE PHARMACOPEIA OF THE UNITED STATES AND THE NATIONAL FORMULARY, With Comments. Prepared for the Use of Physicians Under Authorization of the Council on Pharmacy and Chemistry of the American Medical Association by a Committee Consisting of the Following: R. A. Hatcher, M.D. Ernest E. Irons, Ph.D., M.D., Torald Sollmann, M.D., and W. A. Puckner, Phar. D., Secretary of the Council on Pharmacy and Chemistry. Chicago: American Medical Association. 1931. Price \$6.00

This handy little book, which should be within reach of every prescribing physician, takes the place of the Physicians' Manual of the U. S. Pharmacopeia and National Formulary," first issued by the Journal of the American Medical Association in 1907. This edition is based on the tenth revision of the Pharmacopeia and the fifth edition of the Formulary.

The aim has been to include all the matter in both the standard books cited which is likely to be of interest to physicians, omitting technicalities of value to pharmacists especially.

The epitome has been prepared under the authorization of the Council on Pharmacy and Chemistry of the American Medical Association.

Medical Clinics of North America

MEDICAL CLINICS OF NORTH AMERICA. Philadelphia Number. Volume 13, Number 2, September, 1931. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per Clinic year, July 1931 to May 1932. Price, Paper, \$12.00; Cloth \$16.00.

The September, 1931, number of the Medical Clinics of North America—the Philadelphia number—contains 29 contributions, the majority being furnished by members of the staff of the University of Pennsylvania Hospital and the Jefferson Medical College Hospital.

Excellent clinical matter which will be appreciated by general practitioners is to be gleaned from the following papers: "Diathetic Eczema: The Cutaneous Phase of the Eczema-Asthma-Hay-fever Complex," by Dr. J. H. Stokes; "Cardiac Patients with Other Associated Diseases," by Drs. T. G. Schnabel and F. E. Leivy; "Lobar Pneumonia," by Dr. R. S. Boles; "Staphylococcus Septicemia," by Dr. H. R. Keeler; "Some Diagnostic Problems in Pyloric Obstruction," by Dr. H. Shay and E. M. Schloss; "Neurosyphilis: Its Diagnosis and Treatment," by Dr. S. F. Gilpin; "Acute Gonococcal Endocarditis," by

Drs. D. A. Cooper and G. H. Klinck, Jr.; and "Results of Oxygen Administration in Pneumonia," by Dr. L. H. Collins.

Sorsby: Cancer and Race

CANCER AND RACE; A Study of The Incidence of Cancer Among Jews; Conducted Under the Auspices of The Jewish Health Organization of Great Britain. By Maurice Sorsby, M.D., F.R.C.S.E., Hon. Assistant Surgeon, Ear, Nose and Throat Department, London Jewish Hospital; Hon. Surgeon, Ear, Nose and Throat Department, Haistow Children's Hospital; etc. With a Preface By Lieut.-Col. F. E. Fremantle, M.A., M.D., M.Ch., F.R.C.P., F.R.C.S., D.P.H., M.P., Consulting County Medical Officer of Health for Herts. New York: William Wood and Co. 1931. Price \$3.00.

The view has been held and expressed that the incidence of cancer is to a considerable extent influenced by race; thus it is considered that the Jewish race is, at least to a considerable degree, immune to cancer. This is the subject of inquiry by Dr. Sorsby in his book.

Dr. Sorsby has taken the greatest pains to collect reliable statistical information from the principal centers of Jewish population in the world and has analyzed his findings. These show that the Jewish race exhibits a higher degree incidence than non-Jews, of cancer of the gastrointestinal tract and of the ovaries, but a much lower incidence of cancer of the uterus, penis and buccal cavity.

The reasons for lower incidence of cancer of certain organs in Jews is not to be referred to their race, since race apparently, as a general factor, does not affect cancer incidence. The almost complete absence of penile cancer in Jews is apparently to be explained by the hygienic habit of circumcision. The greatly reduced incidence of uterine cancer in Jewesses is explained by the rigorous ritualistic observances imposed by the Mosaic code on the sexual life of women.

The statistical and other data collected by the author will provide interesting reading.

Cummer: Clinical Laboratory Methods

A MANUAL OF CLINICAL LABORATORY METHODS. By Clyde Lottridge Cummer, Ph.B., M.D., F.A.C.P., Formerly Associate Clinical Professor of Clinical Pathology, School of Medicine, Western Reserve University, Cleveland; Instructor in Dermatology and Syphilology, School of Medicine, Western Reserve University; etc; Third Edition Thoroughly Revised. Illustrated with 173 Engravings and 12 Plates. Philadelphia: Lea and Febiger. 1931. Price \$6.75.

The third edition of Dr. Cummer's manual of clinical pathologic laboratory procedures is an excellent practical exposition of the subject. It is not alone a textbook for students, but is a guide and reference book for physicians and laboratory technicians.

All the methods of examination of pathologic material, with the tests in ordinary use, are described and the general morphologic (including histologic) changes in the tissues, as affected

in particular morbid conditions, are depicted.

In this third edition, the new matter includes Kline's reaction in syphilis, Alzheimer's method for studying the contents of the spinal fluid, Newcomer's method of determining hemoglobin content of the blood and a number of other minor improvements on older procedures. In addition, the text has been overhauled and revised throughout the whole book.

The 12 chapters comprised in the volume cover the laboratory investigation of the blood, urine, gastric and intestinal contents, feces, sputum, body fluids and basal metabolism. The addenda include a number of matters which will be appreciated by the laboratory worker.

This manual of pathologic laboratory technic can be recommended as a thoroughly practical and concise one to those who have need of such.

Brodhead: Approaching Motherhood

APPROACHING MOTHERHOOD; Questions And Answers Of Maternity. By George L. Brodhead, M.D., Consulting Obstetrician, Bellevue and Allied Hospitals, Harlem Division, and New York Nursery & Child's Hospital; Visiting Obstetrician, Knickerbocker Hospital, etc. Third Edition Reprinted With Corrections. New York: Paul B. Hoeber, Inc. 1930. Price \$1.50.

This handy little volume will appeal to the prospective mother. In an attractive, concise, question-and-answer style, and in language easily understood by the laywoman of ordinary intelligence, it give all the essential information concerning herself and her child that every mother should know. Prenatal care naturally receives major attention. The volume may be strongly recommended by physicians to patients approaching or expecting motherhood.

Kuntz: Neuro-Anatomy

A TEXT-BOOK OF NEURO-ANATOMY. By Albert Kuntz, Ph.D., M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine. Illustrated with 197 Engravings. Philadelphia: Lea & Febiger. 1931. Price \$5.50.

In this new textbook of neuro-anatomy the author's main purpose is to present to the student a simple and understandable account of the complex mechanism of the anatomy and physiology of the human nervous system. Unnecessary minutiae are avoided and an attempt is made to correlate anatomic details with the fundamental structural plan of the vertebrate nervous system and to discuss the anatomic structure of the parts of the human nervous system in the light of our present knowledge of developmental and physiologic relationships.

The work is frankly a compilation, the chief merit being perspicacity in arrangement and logical sequence of associated subjects.

There are 22 chapters, which deal successively with the origin and differentiation of the neural tube, the topography and structural details of the central nervous system, the structure of the spinal cord and its conduction pathways, the brain and its dependencies, the autonomic nervous system, cerebral cortex and the nervous sensory apparatus.

The text is clarified by the numerous illus-

trations, selected with special care, many of which are original. Each chapter has a list of selected bibliographic references, for those who wish more extensive study.

Altogether, the book is one which should be very valuable to every student of neuro-anatomy, as well as to the anatomist, physiologist, clinician and neuro-surgeon.

Kur : Muscle Innervation

DIE VIERFACHE MUSKELINNervation einschliesslich der Pathogenese und Therapie der progressiven Muskeldystrophie. Von Ken Kur , Professor an der Universit t Tokyo, Direktor der Medizinischen Klinik. Mit 137 Abbildungen. Berlin und Wien: Urban & Schwarzenberg. 1931. Price geh. RM 20.—.

This monograph deals with the various methods of investigating muscle tonus. Sections are devoted to the sympathetic, parasympathetic and cerebrospinal muscle tonus; to considerations of the action of extrapyramidal fibers; the central regulation of muscle tonus and a number of other interesting aspects of the nervous agencies involved in muscle action and muscle function.

The work described is naturally to a large extent experimental and academic and will be of interest only to special students and investigators of neurology who read German.

Holmyard: Makers of Chemistry

MAKERS OF CHEMISTRY. By Eric John Holmyard, Membre Correspondant du Comit  International d'Histoire des Sciences. Oxford, The Clarendon Press. (Oxford University Press, 114 Fifth Avenue, New York City.) 1931. \$2.50.

The author states in the preface that his book is intended for the reader with no special scientific training. It should indeed prove most interesting to the lay reader and to the chemist who is interested in the history of the development of chemistry as a science.

The book is well and clearly written and traces the development of chemistry from pre-historic days up to the present time. The method of presentation is biographical, the progress of the science being traced by the accomplishments of individual chemists. Moreover, the author has omitted little personal details, which add much to the interest of the book. If a character had a regrettable weakness, the fact may be mentioned, but it is not repeated until the reader throws down the book in disgust. There is no attempt to make any individuals or groups appear as the outstanding contributors.

The author is particularly careful to distinguish between those incidents or discoveries which have been reliably authenticated and those which are only conjectured.

"It is fatally easy to read into the views of bygone scientists ideas of a later period, and to credit them with discoveries or theories or opinions to which, in actual fact, they have no claim whatever." (p. 22).

Holmyard has succeeded in presenting his subject in such a manner that it can be understood by one who has little scientific training. To the scientist, the book is an interesting short review of the history of chemistry, from the beginning to the present

This volume is recommended, both for its inclusion, in so brief a space, of the pertinent facts necessary for a broad understanding of the development of modern chemistry, and its human interest in the description of the peculiarities of its "heroes".

M. B. M.

Medical Record Visiting List

THE MEDICAL RECORD VISITING LIST OF Physicians' Diary, for 1932. Revised. New York: William Wood & Company. Price \$2.00.

This annually-issued physician's pocket book for the year 1932 is arranged with sufficient space for notes of visits, to the extent of 60 patients per week. In addition, it is a vade mecum of essential information for emergencies, with dose tables, etc., containing, as well, space for obstetric and other engagements. Every visiting practitioner needs such a notebook.

Surgical Clinics of North America

THE SURGICAL CLINICS OF NORTH AMERICA. Pacific Coast Surgical Association Number Volume 11, Number 5, October, 1931. Philadelphia and London: W. B. Saunders Company. Issued serially one number every other month. Per clinic year (February, 1931 to December, 1931), Paper, \$12.00, Cloth, \$16.00.

The October, 1931, issue of The Surgical Clinics of North America is devoted to contributions from members of the Pacific Coast Surgical Association. There are 49 articles, mostly short, from 30 clinics.

Some papers that will interest the general practitioner are: "Four Cases of Retroperitoneal Tumor," by Drs. T. O. Burger and C. J. Osborne; "Neglected Cholecystitis," by Dr. J. E. Else; "Neck Metastases from Lip and Mouth Cancer," Drs. A. R. Kilgore and L. R. Taussig; "Carcinoma of Breast: Radical Amputation with Caution," by Drs. J. T. Mason and J. W. Baker; "Hydronephrosis," by Dr. A. J. Scholl; "Carcinoma of the Stomach," by Dr. C. T. Sturgeon; "Ruptured Duodenal Ulcer," by Dr. W. A. Taylor; and "Banti's Disease," by Drs. A. Weeks and G. D. Delprat.

Many of the other papers are of more interest to the surgical specialist or pathologist, dealing with rare or unusual conditions or involving special surgical procedures.

This number is, on the whole, an excellent one.

Natrass: Commoner Nervous Diseases

THE COMMONER NERVOUS DISEASES: For General Practitioners And Students. By Frederick J. Natrass, M.D. Dunelm., F.R.C.P. Lond., Assistant Physician, Royal Victoria Infirmary, Newcastle-Upon-Tyne. New York and London: Humphrey Milford, Oxford University Press. 1931. Price \$4.00.

This concise manual of the commoner diseases of the nervous system should be of value to general practitioners and students as a diagnostic aid because it summarizes and differentiates the chief clinical symptoms arising from infectious

and other derangements affecting the brain and cord or particular sections of the nervous complexes.

The author does not deal with pathology or histologic details, but the possibilities of treatment are outlined, such as, for instance, the likelihood of improvement or even cure from liver treatment in cases of degeneration of the spinal cord associated (as they very frequently are) with anemia of the pernicious type.

The 20 short chapters in the book include disseminated sclerosis, syphilis of the nervous system, neurites, neuralgias, cerebral vascular lesions and tumors, meningitis, encephalitis, epilepsy and the minor nervous derangements such as chorea.

Rowe: Food Allergy

FOOD ALLERGY: Its Manifestations, Diagnosis and Treatment with a General Discussion of Bronchial Asthma. By Albert H. Rowe, M.S., M.D., Philadelphia: Lea and Febiger. 1931. Price \$5.00.

A subject which has been limited to a chapter in the recent books on Allergy in here amplified in the volume of more than 400 pages, not one of which is devoted to theory. It is written by one of the leading allergists of the country and is the result of his own rich experience and a thorough knowledge of the international literature on the subject. It will be found useful to all physicians, even surgeons, as for example, it is a well established fact that food sensitization can cause symptoms simulating gall-bladder disease or appendicitis.

If, as Doctor Rowe contends, thirty percent of all persons are subject to food idiosyncrasies of sufficient severity to be, at least, a complicating factor in diagnosis, the importance of the subject is established. The author's outstanding contribution is his method of using "elimination diets" to supplement skin testing in the diagnosis of allergic diseases, which diets are also exceedingly useful in therapy.

O. C. D.

Tinkham: Debunking of Advertising

THE DEBUNKMENT OF ADVERTISING AND PROSPERITY. By Julian Tinkham. Illustrated. New York: The Prosper Books Company, 60 West 10th Street. 1928-1930. Price \$2.00.

Someone once wrote a doggerel which ran something like this:

"He who in this world would rise
"Must either bust or advertize."

Most of those who "rise" in the world are good direct or indirect advertisers and evidently advertising or publicity or what-you-will pays them, but what of the people who are advertised to? Do they gain or lose?

Mr. Tinkham argues that, in general (for there are admittedly exceptions), advertising, especially competitive advertising, is a social disservice: that it forces unwanted and mostly inferior things upon us; that it kills individual taste and selection and tends to standardise what the advertisers want to sell; that the public pays the cost of advertising in addition to the value of the thing bought; that it is a smoke-screen behind the object advertised which hides better

objects of the same kind from the public; that the public knows what it wants without being told and will find out and buy what is really good without blatant advertising; that the statements made in advertisements are generally calculated to deceive or at least hide some of the truth and are in fact to a great extent bunk.

In America, according to Mr. Tinkham, publicity has become the national god. Business has corralled the government, the law and the people. The People have become goats and advertising is the milking machine by which business squeezes them dry.

In a round statement, Mr. Tinkham believes that the greater part of public advertising is entirely unnecessary, a vast economic waste and even harmful to real progress. Apart from this, that it is even offensive, a disfiguration of public places and natural scenic vistas and tends to a degradation of public taste and decency.

The prohibition of advertising on lands and buildings not owned by the advertiser, in public conveyances and stations, etc., of common carriers—in fact, the restriction of public posters, signs and billboards as much as possible—is advocated. Also government subsidies through preferential postal rates on advertising matter should be discontinued and public advertising taxed.

Mr. Tinkham has, since before the war, publicly and privately tried to impress these views on the public. His book is a resume of these efforts, with interspersed comments and reproductions of what he considers typical examples of the things he condemns. To judge of his arguments, better read the book, which will be found very interesting.

Campbell: Infections of the Kidney

INFECTIONS OF THE KIDNEY. By Meredith F. Campbell, M.D., F.A.C.S., Attending Urologist, Babies' Hospital, New York Nursery and Child's Hospital; Assistant Visiting Urologic Surgeon, Bellevue Hospital, New York. *Harper's Medical Monographs.* New York and London: Harper & Brothers Publishers. 1931. \$3.00.

This is one of *Harper's Medical Monograph Series* on diagnosis and treatment, designed for the use of general practitioners.

Owing to his special opportunities to observe kidney diseases, especially in children, the author is qualified to write authoritatively on the subject.

The 12 chapters making up the book include methods of examination, etiology, symptoms, diagnosis and treatment of the commoner kidney and perirenal infections, as well as the infections of pregnancy, renal tuberculosis and the kidney infections of childhood.

As an aid to the diagnosis and treatment of a group of conditions in which they are unusually difficult, this little manual should prove of great value to the practitioner and helpful even to the specialist.

There are a few grammatical errors which should have been corrected in the proof-reading.

Thakkar: Intravenous Therapy

INTRAVENOUS THERAPY. By K. V. Thakkar, L.M. & S. (Bombay University). Chief Medical Officer, Idar State; Late Chief Medical Officer to the States of Palitana, Wankaner & Manavadar, etc. With Illustrations and Coloured Frontispiece. Foreword By Major General A. Hooton, C. I. E., I.M.S., (Retd.), Late Surgeon-General with the Government of Bombay. London: Butterworth & Co., (Publishers) Ltd. 1931. Price Rupees Five.

The author's object in writing this little book is to present a guide to those who wish to practice intravenous medication but who, for one reason or another, avoid it as a dangerous procedure.

The opening chapters are devoted to technic, apparatus, precautions and dangers. Then follow the indications and methods indicated for special medications: hypertonic saline solution, the arsenamines, etc., with a posologic table.

While frankly a compilation, the general practitioner who is not familiar with intravenous technic will find here a modest and clear account of the procedure.

Meyer-Burgdorff: Spinal Vertebrae

UNTERSUCHUNGEN UBER DAS WIRBELGLEITEN. Von Prof. Hermann Meyer-Burgdorff, Oberarzt der Chirurgischen Univ.-Klinik Rostock. Mit 155 Abbildungen. Leipzig: Georg Thieme. 1931. Price M. 15.-, geb. M. 17.-.

This monograph deals with spondylolisthesis and the general symptom complexes which arises from displacements of the lumbar vertebrae and allied conditions. It explains the mechanical conditions which give rise to backache, especially in women.

Orthopedists who read German will find many valuable diagnostic and therapeutic pointers here.

Brugsch: System of Medicine

ERGEBNISSE DER GESAMTEN MEDIZIN; Unter Mitwirkung hervorragender Fachgelehrter. Herausgegeben von Prof. Dr. Th. Brugsch, Sechszenter Band, 1. Hälfte und 2. Hälfte. Berlin und Wien: Urban & Schwarzenberg. 1931. Price, geh. RM 30.—; geb. RM 35.—.

The sixteenth volume (Parts I and II) of the system of general medicine edited by Professor Brugsch contains contributions on diversified subjects from leading German and some foreign practitioners. The chapters include narcosis, intravenous medication, lung inflammations, the vicissitudes of the birth rate, ascariis infection, dengue fever, etc.

The work is very thorough, for those who read German, and when completed will provide an inclusive survey of the present scope of medical knowledge with reliable information concerning the different fields.

MEDICAL · NEWS



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Famous Scientists Meet

At a recent meeting in Rome, Italy, famed scientists from all over the world met to discuss the mystery of the electrons and the theories of radiant energy.

The picture shows **Dr. Robert A. Millikan**, of the California Institute of Technology, discoverer of the Millikan or cosmic rays, talking with **Mme. Marie Curie**, co-discoverer of radium.

suggestion, printed, in black, such as: "Look both ways when crossing streets"; "Eat slowly and chew your food well"; "Always walk on the left-hand side of highways"; "A half-well person is a half-dead person. See your doctor"; etc. A thing like that ought to be helpful.



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Health and Accident Calendar

Dr. Samuel J. Rose, having witnessed a fatal accident to a member of his family, is making a campaign for warnings, to be reiterated in newspapers and magazines and posted along highways and in other public places.

Part of his scheme is a calendar, having light-faced figures in red, and in every space a brief and pointed medical or safety

New Head of Navy Medical School

Captain William H. Bell, Medical Corps, U. S. Navy, who has recently been appointed Commander of the Navy Medical School, at Washington, D. C., relieving Capt. Chas. S. Butler, who was ordered to the command of the Naval Hospital at New York.



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Leading Surgeons

The American College of Surgeons held its twenty-first Clinical Congress in New York City, in mid-October.

The picture shows (left to right) the new president of the College, **Dr. Allen B. Kanavel**, of Chicago; the retiring president, **Dr. C. Jeff Miller**, of New Orleans, and the permanent director-general, **Dr. Franklin H. Martin**, of Chicago.

Don't forget "Who's Your Health Banker?" Send for your copy. It will build your practice.

Medical Motion Pictures

The extent to which motion pictures are already serving the medical profession, as well as lay audiences interested in the study of physiology and health and hygiene subjects, is revealed by an interesting survey, entitled "Medical Films and their Sources," prepared for free distribution by Wm. F. Kruse.

Over 450 titles, comprising 538 reels of 16 mm. safety film, are listed and described. Definite information is also given as to where the films may be obtained, with the rental or purchase price asked by their owners or distributors. Separate classifications list medical-surgical films intended for professional use exclusively; health and hygiene films for lay audiences; and similar films obtainable from university extension divisions and intended primarily for school use. A special supplement lists dental and oral hygiene films.

Copies of this survey may be obtained, without charge, by any medical, surgical,

dental, or similar school or society; by hospitals and public health authorities; by any active practitioner; or by educators or school administrators interested in the use of motion pictures in the field of health and hygiene. Applications should be made direct to Educational Department, Bell & Howell Company, 1801 Larchmont Avenue, Chicago.

Educate your patients. Your copy of "What About Heart Disease?" is ready now.



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The Glarometer

A new instrument, the "Glarometer", which tests and measures the effect of natural and artificial glare on the human eye, was recently introduced before members of the Los Angeles Optometric Society by William Arthur Mendelsohn (left) of the Post Graduate Eye Institute of Chicago.

The new instrument, which submits the eye to varying degrees of artificial glare and then measures the reaction, is the result of extended research on the part of Mendelsohn and his associate, Carl F. Shepard, of the Chicago Institute.

After nearly a thousand tests with the Glarometer, on eyes accustomed to all kinds of conditions, Mendelsohn told the Optometric Society that the building of the future would undoubtedly be windowless, making possible an even distribution of illumination.

Send · For · This · Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

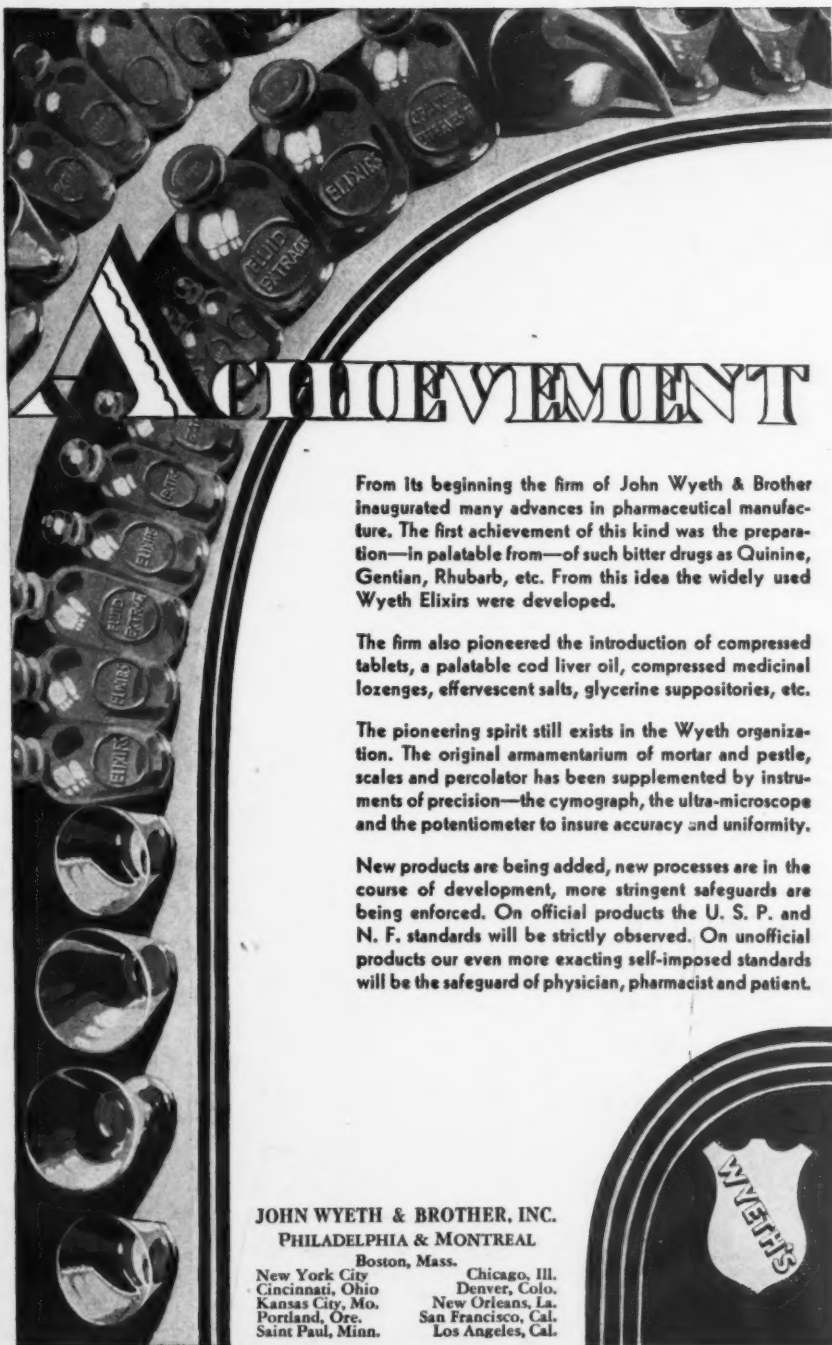
to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physician's use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment, or medicinal supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, or registered pharmacist, or a nurse.

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| <p>U- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.</p> <p>U- 95 Everything for the Sick. Lindsay Laboratories.</p> <p>U-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.</p> <p>U-120 Building Resistance — Guitonic, William R. Warner & Co., Ltd.</p> <p>U-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.</p> <p>U-258 Prophylaxis. August E. Drucker Co.</p> <p>U-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc.</p> <p>U-271 The Intestinal Flora. The Battle Creek Food Company.</p> <p>U-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D. Battle & Company.</p> <p>U-347 Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company.</p> <p>U-354 Getting the Most Out of Life. Stanco, Inc.</p> <p>U-391 Imhotep Egyptian Medicine Was a quaint Mixture of Rationalism and Magic — Agarol. William R. Warner & Co., Inc.</p> <p>U-392 Arthritis. Its Classification and Treatment. Battle & Co.</p> <p>U-410 Acidosis. A Warning Sign in Pregnancy—Alka-Zane. Wm. R. Warner & Co., Inc.</p> | <p>U-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co.</p> <p>U-456 Science Applied to Tobacco. Health Cigar Company, Inc.</p> <p>U-465 Diagnosis of Cardio-Vascular Diseases, by Henry Irving Berger, M.D. Sultan Drug Company.</p> <p>U-480 The Incidence of Eczema in Skin Diseases in about 20 percent. Bilhuber-Knoll Corp.</p> <p>U-504 Bedtime Nourishment. Mellin's Food Co.</p> <p>U-525 The Treatment of Hemorrhage with Therapeutic Notes on the Use of Ceanothyn. Flint, Eaton & Company.</p> <p>U-554 Eliminating the Nasal Pathology of Hay Fever. Metapollen Laboratories.</p> <p>U-556 The Colon. A Factor in Disease by H. W. Rothman, M.D. and O. Boto Schellberg. Schellberg Manufacturing Corporation.</p> <p>U-557 "The Newer Knowledge of Ethyl Iodide Therapy" Non-toxic Iodine Inhalation. Local and General Infections of Skin, Nose, Throat and Lungs. Burnham Soluble Iodine Co.</p> <p>U-560 This Perfected Potent Remedy For Skin Diseases — Healoderm. Healoderm, Ltd.</p> <p>U-564 Peptic Ulcer. A symposium of the current literature. The BiSoDol Co.</p> <p>U-568 Letters in Evidence. Philo Burt Company.</p> |
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For Teeth and Gums



*Never in
Paste Form*

CLEANLINESS without injury to tooth structure or tissues is the most essential necessity in a dentifrice.

INJURIOUS SUBSTANCES — as GLYCERINE, GRIT, CHLORATE OF POTASH, or any CORROSIVE COMPOUND should not be incorporated in the manufacture of a dentifrice.

GLYCERINE is a depletent, it saps the moisture from the tissues, which naturally will recede exposing the periodontal membrane causing sensitiveness and bleeding. This moisture in the cellular tissue is essential to the healthy condition of the membrane.

REVELATION TOOTH POWDER is never in paste form and contains none of the above mentioned drugs.

*[Upon receipt of your professional card
we will be pleased to mail you a can.]*

AUGUST E. DRUCKER COMPANY

2226 BUSH STREET
SAN FRANCISCO

